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COMMERCIAL FERTILIZERS

REPORT FOR 1946

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Connecticut
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New Haven

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FRED R. ZELLER,
State Comptroller.

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Report on Inspection and Analysis of Commercial Fertilizers, 1946

H. J. Fisher, *Chemist in Charge*[1]

CONNECTICUT LAW AND REGULATIONS REGARDING COMMERCIAL FERTILIZERS

The term "commercial fertilizers" as used in the Connecticut fertilizer statute includes any and every substance imported, manufactured, prepared or sold for fertilizing or manuring or soil amendment purposes, except barnyard manure and stable manure that have not been artificially treated or manipulated, marl and lime. But no commercial fertilizer containing less than 0.82 per cent of nitrogen, or less than 1 per cent of phosphoric acid, or less than 1 per cent of potash is acceptable for registration.

The seller is responsible for the proper labelling of each package of fertilizer, for the registration of each brand sold or offered for sale, for the payment of the required analysis fee and for the payment of the tonnage tax. If, however, proper labelling, registration and payments of analysis fees and of tonnage tax have been provided for by the manufacturer or by another responsible person, all sellers of such brands are released from the above-mentioned requirements. The retailer, therefore, should assure himself that the requirements of the law have been met by the manufacturer of the brands which he handles, or himself be prepared to meet all these requirements.

It frequently happens that a manufacturer or jobber sells fertilizer materials which are the products of, and which are registered by, another firm or individual. Distributors in such cases should sell such materials by the exact brand names under which they are registered in order that there may be no mistake as to the identity of brands. Any change in the brand names, or failure to make the identity of the brand and its manufacturer clear, makes the distributor liable for the registration of the product as his own brand.

The law exempts from registration, and from other requirements referred to, only (1) fertilizers passing through the State in transit; (2) fertilizers and fertilizer materials shipped to regular fertilizer factories to be used for manufacturing purposes, and (3) fertilizers and fertilizer chemicals sold to the Connecticut Agricultural Experiment Station for experimental purposes.

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[1] E. M. Bailey was in charge of the Department of Analytical Chemistry until his retirement on October 1, 1945. Analyses reported were made by Messrs. O. L. Nolan, Richard Merwin, D. C. Walden (deceased), Alphonse Wickroski and Miss Helen Kocaba; inspection and sampling by Messrs. George Smith and Richard Nichols; and compilations by Mr. Nolan and Mrs. M. B. Vosburgh.

Cottonseed, linseed and soybean meals, when sold or used for fertilizer purposes, must be registered as fertilizers and the specified fees paid thereon. For such products the registration fee is $10.00 for each brand, payable annually, and six cents per ton tonnage fee, payable semi-annually.

These fees are entirely apart from those required by the feeding stuffs statute.

Because manufacturers or jobbers do not know how much, if any, of their vegetable meal tonnage is sold or used as fertilizer, local dealers and purchasers report their sales or purchases to this Station. The information is not for publication but is used to inform manufacturers of the total sales of their meal as fertilizer in this State. It is expected that the fees provided for by statute will be paid by the manufacturer or other party responsible for the brands.

Official Definitions of Fertilizer Terms and Materials[1]

An *acid-forming fertilizer* is one that is capable of increasing the residual acidity of soil.

A *non-acid-forming fertilizer* is one that is not capable of increasing the residual acidity of the soil.

Acidulated fish tankage or acidulated fish scrap is the rendered product derived from fish and treated with sulfuric acid.

Activated sewage products are those made from sewage freed from grit and coarse solids and aerated after being inoculated with microorganisms. The resulting flocculated organic matter is withdrawn from the tanks, filtered with or without the aid of coagulants, dried, ground and screened.

Agricultural liming material is material whose calcium and magnesium content is capable of neutralizing soil acidity.

Air-slaked lime is a product composed of varying proportions of the oxide, hydroxide and carbonate of calcium, or of calcium and magnesium, and derived from exposure of quicklime.

Ammoniated superphosphate is the product obtained when superphosphate is treated with ammonia or with a solution containing free ammonia and other forms of nitrogen dissolved therein.

The word *analysis*, as applied to fertilizers, shall designate the percentage composition of the product expressed in those terms that the law requires and permits.

Ashes from leached wood are unleached ashes resulting from burning wood that has been exposed to or digested in water or other

[1] Cited from Methods of Analysis, 6th Ed. 1945, Association Official Agricultural Chemists.

liquid solvent, as in the extraction of dyes, so that a part of the plant food has been dissolved and removed.

Available phosphoric acid is the sum of the water-soluble and the citrate-soluble phosphoric acid.

"*Basic*" *lime phosphate* (*lime-based superphosphate*) is a superphosphate to which liming materials have been added in a quantity at least six per cent (6%) calcium carbonate equivalents in excess of the quantity required to convert all water-soluble phosphate to the citrate-soluble form.

Basic phosphate slag is a by-product in the manufacture of steel from phosphatic iron ores. The product shall be finely ground and shall contain no admixture of materials other than what results in the original process of manufacture. It shall contain not less than twelve per cent (12%) of total phosphoric acid (P_2O_5), not less than eighty per cent (80%) of which shall be soluble in two per cent (2%) citric acid solution according to the Wagner method of analysis, **2.19** or **2.20.** Any phosphate slag not conforming to this definition shall be designated *low grade.*

Bat guano is partially decomposed bat manure.

Bat manure is the dry excrement from bats.

A *brand* is a term, design or trademark used in connection with one or several grades of fertilizers.

A *brand name* is a specific designation applied to an individual fertilizer.

Calcium nitrate (nitrate of lime) is a commercial product consisting chiefly of calcium nitrate, and it shall contain not less than fifteen per cent (15%) of nitrogen.

Citrate-soluble ("*reverted*") *phosphoric acid* is that part of the total phosphoric acid in fertilizer that is insoluble in water but soluble in a solution of citrate of ammonia according to the method adopted by the Association of Official Agricultural Chemists.

Crude, inert, or slow-acting nitrogenous materials are unprocessed organic substances relatively high in nitrogen but having a very low value as plant food and showing a low activity by both the alkaline and neutral permanganate methods (below 50% and 80%, respectively).

Cyanamid is a commercial product composed chiefly of calcium cyanamide ($CaCN_2$), and it shall contain not less than twenty-one per cent (21%) of nitrogen.

Dicalcium phosphate is a manufactured product consisting chiefly of a dicalcic salt of phosphoric acid.

Dissolved bone is ground bone or bone meal that has been treated with sulfuric acid.

Dolomite is a mineral composed chiefly of carbonates of magnesium and calcium in substantially unimolal (1-1.19) proportions.

Dried blood is the collected blood of slaughtered animals, dried and ground and containing not less than twelve per cent (12%) of nitrogen in organic forms.

Dried, pulverized, or shredded manures are what the name indicates, and not mixtures of manures and other materials.

Fertilizer grade shall represent the minimum guaranty of its plant food expressed in terms of *nitrogen* (*not ammonia*), *available phosphoric acid*, and *water-soluble potash*.

Fish tankage, fish scrap, dry ground fish or *fish meal fertilizer grade*, is the dried ground product derived from rendered or unrendered fish.

Garbage tankage is the rendered, dried and ground product derived from waste household food materials.

Pulverized limestone (*fine-ground limestone*) is the product obtained by grinding either calcitic or dolomitic limestone so that all the material will pass a 20-mesh sieve and at least seventy-five per cent (75%) will pass a 100-mesh sieve.

Ground limestone (*coarse-ground limestone*) is the product obtained by grinding either calcitic or dolomitic limestone so that all the material will pass a 10-mesh sieve, and at least fifty per cent (50%) will pass a 100-mesh sieve.

Ground shells is the product obtained by grinding the shells of mollusks so that not less than fifty per cent (50%) shall pass a 100-mesh sieve. The product shall also carry the name of the mollusk from which said product is made.

Ground shell marl is the product obtained by grinding natural deposits of shell marl so that at least seventy-five per cent (75%) shall pass a 100-mesh sieve.

Ground raw bone is dried ground animal bones that have not been steamed previously under pressure.

Ground steamed bone is ground animal bones that have been steamed previously under pressure.

Gypsum, land plaster or *crude calcium sulfate* is a product consisting chiefly of calcium sulfate. It may contain twenty per cent (20%) of combined water. (It does not neutralize acid soils.)

High calcic products are materials of which ninety per cent (90%) or more of the total calcium and magnesium content consists of calcium oxide.

High magnesic products are materials in which more than ten

per cent (10%) of the total calcium and magnesium oxide consists of magnesium oxide.

Hoof and horn meal is processed, dried, ground hoofs and horns.

Hydrated or slaked lime is a dry product consisting chiefly of the hydroxide of calcium and oxide-hydroxide of magnesium.

Kainit is a potash salt containing potassium and sodium chlorides and sometimes sulfate of magnesia with not less than twelve per cent (12%) of potash (K_2O).

Leached wood ashes are ashes from burned unleached wood with part of their plant food removed by artificial means or by exposure to rains, snows, or other solvent.

The word *lime* when applied to liming materials means either calcium oxide or calcium and magnesium oxides.

Magnesia (magnesium oxide) is a product consisting chiefly of the oxide of magnesium. Its grade shall be stipulated. Example: Magnesia – 75 per cent MgO.

Manganese. The water-soluble (or available) manganese in fertilizers shall be expressed as manganese (Mn).

Manganese sulfate. The term manganese sulfate, when applied to an ingredient of a mixed fertilizer, shall designate anhydrous manganous sulfate ($MnSO_4$).

Manure salts are potash salts containing high percentages of chloride and from twenty per cent (20%) to thirty per cent (30%) of potash (K_2O). The term *double manure salts* should be discontinued.

Monoammonium phosphate (*fertilizer grade*) is a commercial salt made by combining phosphoric acid with ammonia. It shall contain not less than ten per cent (10%) of nitrogen and not less than forty-six per cent (46%) of available phosphoric acid.

Muriate of potash (commercial potassium chloride) is a potash salt containing not less than forty-eight per cent (48%) of potash (K_2O), chiefly as chlorides.

Nitrate of ammonia (ammonium nitrate) is a product composed chiefly of nitrate of ammonium. Its nitrogen content shall be stipulated. Example: Ammonium nitrate – 30 per cent N.

Nitrate of potash (commercial potassium nitrate) is a salt containing not less than twelve per cent (12%) of nitrogen and forty-four per cent (44%) of potash (K_2O).

Nitrate of soda (commercial sodium nitrate) is commercial sodium nitrate containing not less than fifteen per cent (15%) of nitrogen, chiefly as sodium nitrate.

Nitrate of soda and potash is a commercial product containing nitrates of sodium and potassium, and it shall contain not less than fourteen per cent (14%) of nitrogen (N) and fourteen per cent (14%) of potash (K_2O).

Peat is a partly decayed vegetable matter of natural occurrence. It is composed chiefly of organic matter that contains some nitrogen of low activity.

Charred peat is peat artificially dried at a temperature that causes partial decomposition.

Phosphate rock is a natural rock containing one or more calcium phosphate minerals of sufficient purity and quantity to permit its use, either directly or after concentration, in the manufacture of commercial products.

The term *phosphoric acid* designates phosphorus pentoxide (P_2O_5).

The term *potash* designates potassium oxide (K_2O).

Precipitated bone phosphate is a by-product from the manufacture of glue from bones and is obtained by neutralizing the hydrochloric acid solution of processed bone with calcium hydroxide. The phosphoric acid is chiefly present as dicalcium phosphate.

Precipitated phosphate is a product consisting mainly of dicalcium phosphate obtained by neutralizing with calcium hydroxide the acid solution of either phosphate rock or processed bone.

Primary fertilizer components are those at present generally recognized by law as necessary to be guaranteed in fertilizers, namely: nitrogen, phosphoric acid (P_2O_5), and potash (K_2O).

Secondary fertilizer components are those other than the "primary fertilizer components" that are essential to the proper growth of plants and that may be needed by some soils. Some of these components are calcium, magnesium, sulfur, manganese, copper, zinc and boron.

Process tankages are products made under steam pressure from crude inert nitrogenous materials, with or without the use of acids, for the purpose of increasing the activity of the nitrogen. These products shall be called "Process Tankages" with or without further qualification. The water-insoluble nitrogen in these products shall test at least fifty per cent (50%) active by the alkaline, or eighty per cent (80%) by the neutral permanganate method.

Products secured by heating calcium phosphate with alkali salts containing potash are non-acid phosphates with potash. They are *not* potassium phosphate.

Quick lime, burned lime, caustic lime, lump lime, unslaked lime. These designations shall apply to calcined materials, the major part

of which is calcium oxide, in natural association with a lesser amount of magnesium oxide, and which is capable of slaking with water.

Sheep manure—wool waste is the by-product from wool-carding establishments consisting chiefly of sheep manure, seeds, and wool fiber.

Soft phosphate with colloidal clay is a very finely divided low-analysis by-product from mining Florida rock phosphate by a hydraulic process in which the colloidal materials settle at points in artificial ponds and basins farthest from the washer, and are later removed after the natural evaporation of the water.

Sulfate of ammonia (*commercial ammonium sulfate*) is a commercial product composed chiefly of ammonium sulfate. It shall contain not less than twenty and five-tenths per cent (20.5%) of nitrogen.

Sulfate of potash-magnesia is a potash salt containing not less than twenty-five per cent (25%) of potash (K_2O), nor less than twenty-five per cent (25%) of sulfate of magnesia, and not more than two and one-half per cent (2.5%) of chlorine.

Sulfate of potash (*commercial potassium sulfate*) is a potash salt containing not less than forty-eight per cent (48%) of potash (K_2O) chiefly as sulfate, and not more than two and one-half per cent (2.5%) of chlorine.

Superphosphate is a commercial phosphate, the phosphoric acid (P_2O_5) content of which is due chiefly to monocalcium phosphate. (The grade that shows the available phosphoric acid should always be used as a prefix to the name. Example: 16 per cent superphosphate.)

Tankage (without qualification) is the rendered, dried and ground by-product, largely meat and bone from animals (slaughtered or that have died otherwise).

A unit of plant food is twenty (20) pounds, or one per cent (1%) of a ton.

Unleached wood ashes are ashes from burned unleached wood that have had no part of their plant food removed and that contain four per cent (4%) or more of water-soluble potash (K_2O).

Waste lime, by-product lime, is any industrial waste or by-product containing calcium or calcium and magnesium in forms that will neutralize acids. It may be designated by prefixing the name of the industry or process by which it is produced, i.e., gas-house lime, tanners' lime, acetylene lime-waste, lime-kiln ashes, calcium silicate, etc.

REGISTRATIONS

Late Registrations for 1945

To the brands registered for 1945 in our last report should be added:

Eastern States Farmers' Exchange, West Springfield, Mass.
Eastern States 0–20–20

Registrations for 1946

For 1946, 56 firms and individuals registered 243 brands of fertilizers at this Station for sale in the State. As required by statute, the brands are listed as follows:

Acme Guano Co., Baltimore, Md.
Acme 4–12–4
Acme 5–8–7
Acme 5–10–5
Acme 5–10–10
Acme 7–7–7

Agricultural Supply Co., West Haven, Conn.
Yale Special Mixture 8–6–2

Ted Alkire, Lubbock, Tex.
Kireal Cotton Hull Ash

Allied Chemical & Dye Corp., 40 Rector St., New York 6, N. Y.
Arcadian, The American Nitrate of Soda
Arcadian Sulphate of Ammonia
Sulphate of Ammonia

American Agricultural Chemical Co., No. Weymouth 91, Mass.
AA Quality Fertilizer 5–8–7
AA Quality Fertilizer 5–10–10
Agrico Country Club Fertilizer 6–10–4
Agrico for Corn 3–12–6[1]
Agrico for Corn 4–12–8
Agrico for Gardens 4–12–4
Agrico for Gardens 5–10–5
Agrico for Lawns, Trees and Shrubs 4–12–4
Agrico for Lawns, Trees and Shrubs 6–10–4
Agrico for New England 4–10–10
Agrico for New England 5–8–7
Agrico for Potatoes 5–10–10
Agrico for Seeding Down 4–12–16
Agrico for Tobacco 6–3–6
Agrico for Top Dressing 7–7–7
Agrico Phosphate and Potash 0–14–14
18% Normal Superphosphate
Pulverized Sheep and Goat Manure

American Cyanamid Co., 30 Rockefeller Plaza, New York 20, N. Y.
20.6% 'Aero' Cyanamid Granular
Ground Raw Phosphate Rock

American Potash & Chemical Corp., 122 E. 42nd St., New York, N. Y.
Trona Muriate of Potash

American Sumatra Tobacco Corp., 102 Maiden Lane, New York 5, N. Y.
Soybean Meal, 41%

Apothecaries Hall Co., Waterbury, Conn.
Bone Meal
Carbonate of Potash
Castor Pomace
Cotton Hull Ashes
Dry Ground Fish
Liberty Fertilizer 0–14–14
Liberty Fertilizer 0–20–20
Liberty Fertilizer 4–12–4
Liberty Fertilizer 5–10–5
Liberty Fertilizer 5–10–10
Liberty Fertilizer Special for Fruit and Grass 7–7–7
Liberty Fertilizer with Sulphate of Potash 5–10–10
Liberty Green Gro Fertilizer 6–7–4
Liberty High Grade Market Gardeners 5–8–7
Liberty High Grade Market Gardeners with Sulphate of Potash 5–8–7
Liberty Home Garden Fertilizer 5–10–5
Liberty Tobacco Mixture 5–3–5
Liberty Tobacco Mixture 6–3–6
Liberty Tobacco Mixture with Cotton Hull Ashes 6–3–6
Liberty Tobacco Starter 4–10–0
Liberty Tobacco Starter 5–5–15
Muriate of Potash
Nitrate of Potash
Precipitated Bone
Sheep Manure
Sulphate of Ammonia
Sulphate of Potash
Superphosphate 20%

Archer-Daniels-Midland Co., Minneapolis 2, Minn.
Archer Quality 32% Protein Old Process Linseed Oil Meal
Archer Quality 34% Protein Old Process Linseed Oil Meal
Archer Quality 41% Protein Soybean Oil Meal
Archer Quality 44% Protein Soybean Oil Meal

Armour Fertilizer Works, 120 Broadway, New York 5, N. Y.
Armour's Big Crop Fertilizer 0–14–7
Armour's Big Crop Fertilizer 0–14–14
Armour's Big Crop Fertilizer 4–12–4
Armour's Big Crop Fertilizer 5–8–7
Armour's Big Crop Fertilizer 5–10–5
Armour's Big Crop Fertilizer 5–10–10
Armour's Big Crop Fertilizer 7–7–7
Armour's Big Crop Fertilizer 8–16–16
Armour's Big Crop Tobacco Special 5–3–5
Armour's Big Crop Tobacco Special 6–3–6
Armour's Big Crop Superphosphate 20%
Armour's Bone Meal Fertilizer
Armour's Pulverized Sheep Manure
Armour's Special Ornamental Fertilizer 6–12–4
Castor Pomace

Ashcraft-Wilkinson Co., Atlanta 3, Ga.
Cow-Eta Brand 41% Protein Cottonseed Meal
Gilt Edge Brand Old Process 41% Soya Meal
Nitraprills Fertilizer Compound Chemically Prepared

Associated Seed Growers Inc., Milford, Conn.
Asgrow Lawn Food 10–6–4

Atkins & Durbrow, Inc., 165 John St., New York 7, N. Y.
Driconure

The F. A. Bartlett Tree Expert Co., Stamford, Conn.
Bartlett Green Tree Food 4–8–6
Bartlett Green Tree Food 6–8–6

The Berkshire Chemical Co., Bridgeport, Conn.
Berkshire Fertilizer 0–14–14
Berkshire Fertilizer 4–12–4
Berkshire Fertilizer 5–8–7
Berkshire Fertilizer 5–10–5
Berkshire Fertilizer 5–10–10
Berkshire Fertilizer 7–7–7
Berkshire Specialty Fertilizer 6–6–4
Berkshire Tobacco Fertilizer 6–3–6

Chilean Nitrate Sales Corp., 120 Broadway, New York 5, N. Y.
Chilean Nitrate of Soda—Champion Brand
Chilean Nitrate of Soda—Original Old Style

Consolidated Rendering Co., 178 Atlantic Ave., Boston 10, Mass.
Corenco 0–14–14 Top Dresser
Corenco 4–12–4 Complete Manure
Corenco 5–8–7 Potato and General Crop
Corenco 5–10–5 Home Garden Fertilizer
Corenco 5–10–10 Peerless Potato
Corenco 6–3–6 Special Tobacco Grower
Corenco 7–7–7 Complete Fruit and Top Dressing
Corenco 8–6–4 Landscape Fertilizer
Corenco Ground Bone
Corenco Sheep Manure
Corenco Superphosphate 20%

The Davey Tree Expert Co., Kent, Ohio
Davey Shredded Manure
Davey Tree Food 12–4–4

Davison Chemical Corp., Baltimore, Md.
Davco Granulated Fertilizer 5–10–10
Davco Granulated 20% Superphosphate

E. I. du Pont de Nemours & Co., Wilmington 98, Del.
Dupont Uramon Fertilizer Compound

Eastern States Farmers' Exchange, West Springfield, Mass.
Cottonhull Ash 30%
Eastern States 0–19–19 W/Borax
Eastern States 0–20–20
Eastern States 5–10–5 V.G.
Eastern States 5–10–10
Eastern States 5–15–5
Eastern States 5–15–20
Eastern States 8–4–8
Eastern States 8–16–16
Eastern States 8–16–16 LCS
Eastern States 8–24–8
Eastern States 10–10–10
Eastern States Superphosphate Granulated and Pulverized (20%)
Eastern States Triple Superphosphate 47%
Muriate of Potash 60%
Sulphate of Potash 48%

Ford Motor Co., Dearborn, Mich.
Ford Ammonium Sulphate

A. H. Hoffman, Inc., Landisville, Lancaster County, Pa.
Hoffman Sheep Manure (Kiln-Dried)

Hollandale Cotton Oil Co., Hollandale, Miss.
41% Protein Cottonseed Meal

Spencer Kellogg & Sons, Inc., 98 Delaware Ave., Buffalo 5, N. Y.
Castor Pomace
Spencer Kellogg's 41% Protein Soybean Oil Meal

L. B. Lovitt & Co., Memphis, Tenn.
"Lovit Brand" 36% Protein Cottonseed Meal
"Lovit Brand" 41% Protein Cottonseed Meal

McCormick & Co., Inc., Baltimore 2, Md.
Hy-Gro 13–26–13

Miller Chemical & Fertilizer Corp., Baltimore 31, Md.
VHPF 5–25–15

Norwood Brand Fertilizer Co., No. Reading, Mass.
Norwood Brand Sheep Manure

Old Deerfield Fertilizer Co., Inc., So. Deerfield, Mass.
Old Deerfield 5–8–7 All Crop Fertilizer
Old Deerfield 5–5–15 Tobacco
Old Deerfield 5–10–10 Potato Fertilizer
Old Deerfield 6–3–6 Complete Tobacco Fertilizer
Old Deerfield Castor Pomace 5.5%
Old Deerfield Cottonhull Ashes 35%
Old Deerfield Double Sulfate of Potash Magnesia 21.5%
Old Deerfield Dry Ground Fish 9.5% and 5.00%
Old Deerfield Hoof and Horn Meal
Old Deerfield Steamed Bone 2.47%

Olds & Whipple, Inc, Hartford, Conn.
O & W 4–8–4 Complete Lawn Grass Fertilizer
O & W 4–12–4 Market Garden Fertilizer
O & W 5–3–5 Complete Tobacco Fertilizer
O & W 5–3–5 Complete Tobacco Fertilizer Potash derived from Cotton Hull Ash
O & W 5–5–15 High Grade Tobacco Starter and Potash
O & W 5–8–7 Potato and General Purpose Fertilizer
O & W 5–8–7 Potato and General Purpose Fertilizer with Sulphate of Potash
O & W 5–10–5 Fertilizer
O & W 5–10–10 Potato Fertilizer
O & W 6–3–6 Blue Label Tobacco Fertilizer
O & W 6–3–6 Blue Label Tobacco Fertilizer Potash derived from Cotton Hull Ash
O & W 7–7–7 Top Dressing and Grass Fertilizer
O & W Bone Meal
O & W Carbonate of Potash
O & W Castor Pomace
O & W Cotton Hull Ash
O & W Luxura 5–8–6
O & W Menhaden Dry Ground Fish
O & W Sulphate of Potash
O & W Superphosphate
O & W Triple Superphosphate

Plantspur Products Co., Jersey City, N. J.
Plantspur Fertilizer 4–4–2

The Frank S. Platt Co., New Haven 10, Conn.
Platts's Special 10–5–5 Lawn Dressing

Premier Peat Moss Corp., 535 Fifth Ave., New York, N. Y.
Premier-Nure

The Pulverized Manure Co., Chicago 9, Ill.
Wizard Brand Cow Manure
Wizard Brand Pulverized Sheep Manure

Ralston Purina Co., St. Louis, Mo.
Purina Plant Food 5–10–5

The Rogers & Hubbard Co., Portland, Conn.
Castor Pomace
Cotton Hull Ash
Dry Ground Fish
Gro-Fast Bone Meal
Gro-Fast Cow Manure
Gro-Fast Plant Food 5–8–5
Gro-Fast Sheep Manure
Hubbard High Potash Fertilizer 5–10–10
Hubbard Potato Fertilizer 5–8–7
Hubbard Raw Knuckle Bone Flour
Hubbard Tobacco Grower 6–3–6
Muriate of Potash
Red-H 0–14–14
Red-H 4–12–4
Red-H 4–12–8
Red-H 5–8–7
Red-H 5–10–5
Red-H 5–10–10
Red-H 7–7–7
Red-H 8–16–16
Red-H Sulphate of Potash
20% Superphosphate
Victory Garden Fertilizer 5–10–5

Ruhm Phosphate & Chemical Co., Mt. Pleasant, Tenn.
"Red Seal Brand Ruhm's Phosphate Rock 30%"

O. M. Scott & Sons Co., Marysville, Ohio
Scott's Turf Builder 8–8–4[2]

Sears, Roebuck & Co., Chicago 7, Ill.
Garden Master Plant Food 5–10–5
Garden Master Sheep Manure

The Sewerage Commission of the City of Milwaukee, Milwaukee 1, Wis.
Milorganite

Shelco Milling Co., Memphis 1, Tenn.
Shelco Brand 41% Protein Cottonseed Meal, Prime Quality

M. L. Shoemaker, Div. Wilson & Co., Inc., Philadelphia, Pa.
M. L. Shoemaker's "Swift-Sure" 4–10–0 Tobacco Starter
M. L. Shoemaker's "Swift-Sure" 6–3–6 Tobacco Fertilizer

Ernest W. Smith, Farmington, Conn.
Mr. O's Liquid Fertilizer 10–6–3

Southern Cotton Oil Co., Memphis, Tenn.
Sco-Co Brand 41% Protein Cottonseed Meal

A. E. Staley Manufacturing Co., Decatur, Ill.
Staley's Soybean Oil Meal

Stumpp & Walter Co., 132 Church St., New York 8, N. Y.
Sawco Bone
Sawco Emerald Grass 5–10–5
Sawco General Garden 5–10–5
Sawco Superphosphate
Sawconure

Summers Fertilizer Co., Inc., Baltimore 2, Md.
"Summers" 0–20–20 Fertilizer
"Summers" 5–10–10 Fertilizer
"Summers" 8–16–16 Fertilizer
"Summers" 10–10–10 Fertilizer
"Summers" 20% Superphosphate

Swift & Co., Plant Food Div., Baltimore, Md.
Red Steer Brand Superphosphate
Sheep Manure
Swift's Red Steer 5–8–7
Swift's Red Steer 5–10–5
Swift's Red Steer 5–10–10
Vigoro 4–12–4

Tennessee Corp., Lockland, Cincinnati 15, Ohio
5–10–5 Loma

I. P. Thomas & Son Co., Camden, N. J.
I. P. Thomas 4–12–8
I. P. Thomas 5–8–7
I. P. Thomas 5–10–10
I. P. Thomas 7–7–7
20% Superphosphate

Walker-Gordon Laboratory Co., Plainsboro, N. J.
Bovung

Stewart H. Willson, Thompsonville, Conn.
Willson's Old Enfield Tree Food 6–7–4

F. H. Woodruff & Sons, Inc., Milford, Conn.
Gro-Sod Lawn Food 10–6–4

The Woodruff Fertilizer Works, Inc., No. Haven, Conn.
Clark's Tip Top Fertilizer 5–8–7
Woodruff's Castor Pomace
Woodruff's 4–12–4 Fertilizer
Woodruff's 5–8–7 Fertilizer
Woodruff's 5–10–5 Fertilizer
Woodruff's 5–10–10 Fertilizer
Woodruff's 6–3–6 Tobacco Fertilizer
Woodruff's 7–7–7 Fertilizer
Woodruff's Lawn Fertilizer 10–6–4

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[1] Substituted for Agrico Country Club Fertilizer 8–6–2 which was discontinued.

[2] Later revised to "Scott's Turf Builder 8–7–3".

FERTILIZER INSPECTION FOR 1946

During the war, under War Food Order No. 5 only certain specified grades of fertilizers were permitted to be sold. This restriction was revoked as of September 30, 1945. Since that date there has been no legal compulsion on manufacturers to limit the number of grades that they sell. Agronomists and most manufacturers are agreed, however, that the manufacture of a multiplicity of grades serves no useful purpose; it raises the cost of fertilizer to the farmer and offers him no compensating advantage in increased yields. A meeting of the New England agronomists in Boston in November, 1945, discussed the question of grade limitation at considerable length; it was agreed that, under the present fertilizer laws, manufacturers could not be compelled to limit the number of grades that they sold, but it was the unanimous opinion that a voluntary limitation of grades would be to the advantage of both manufacturers and consumers. In the hope that it would serve as a guide to manufacturers, the agronomists approved the following list of fertilizer ratios and minimum grades for each ratio that in their opinion would include all grades of mixed fertilizers for which there was any need in New England:

Ratio	Minimum Grade	
0–1–1	0–14–14	
1–1–1	7– 7– 7	
1–1–3	5– 5–15	(Tobacco)
1–2–1	5–10– 5	
1–2–2	5–10–10	
1–3–2	4–12– 8	
1–3–3	4–12–12	(New Hampshire potato)
1–3–4	4–12–16	
2–1–2	6– 3– 6	(Tobacco)
2–3–4	5– 7–10	(Maine potato)
2–3–5	6– 9–15	(Maine potato)

During the season the Station agents have collected samples of all the registered brands that could be found in the State. A classification of these, including samples submitted by purchasers, is given in the following tabulation. The classification includes also tonnage data for the year July 1, 1945, to June 30, 1946. This tonnage includes vegetable meal tonnage bought by tobacco growers for their own use direct from sources outside the State. It does not include fertilizer distributed in the State under the Federal Agricultural Adjustment Program.

CLASSIFICATION OF FERTILIZER MATERIALS AND FERTILIZER TONNAGE

(Tonnage is for the period July 1, 1945 to June 30, 1946)

		Page	No. of samples	Tonnage	
I.	Containing chiefly nitrogen:				
	Nitrate of ammonia	24	2	259	
	Nitrate of soda	24	5	2,191	
	Sulphate of ammonia	24	2	104	
	Cyanamid and urea	24	5	149	
	Castor pomace	24	14	3,733	
	Cottonseed meal	25	134	4,389	
	Soybean meal		7	689	
	Horn and hoof meal	25	2	78	
	Linseed meal		0	90	
					11,682
II.	Containing chiefly phosphoric acid:				
	Superphosphate 20%	26	12	4,296	
	18 - 19%	26	1	562	
	47%	26	1	33	
	Precipitated bone	26	1	173	
					5,064
III.	Containing chiefly potash:				
	Carbonate of potash	27	10	416	
	Muriate of potash	27	2	425	
	Sulphate of potash	27	3	282	
	Sulphate of potash-magnesia	27	2	114	
	Cottonhull ashes	27	10	1,135	
					2,372
IV.	Containing nitrogen and phosphoric acid:				
	Dry ground fish	28	8	1,464	
	Ground bone	28	14	1,185	
	Other materials	29	1	325	
					2,974
V.	Containing nitrogen and potash:				
	Nitrate of potash		0	160	160
VI.	Mixed fertilizers:				
	Commercial mixtures	30	144	59,095[1]	
	Special and home mixtures	40	79	119	
					59,214
VII.	Miscellaneous:				
	Sheep manure, etc.	43	14	670	
	Limestone and similar materials	44	12	....	
	Fertilizers sold in small packages	45	16	....	
	Other miscellaneous materials	46	24	....	
	Check meals and fertilizers		42	....	
					670
	Totals		567		82,136

[1] For distribution of this tonnage see next page.

Mixed Fertilizer Tonnage

Grades Approved for Connecticut

Grade	Tons	Grade	Tons
0–14–14	721	5–15–20	97
0–19–19	101	6– 3– 6	17,543
0–20–20	181	7– 7– 7	3,201
4–12– 8	371	8– 4– 8	870
4–12–16	105	8–16–16	1,475
5– 5–15	478	10–10–10	404
5–10– 5	2,049	13–26–13	1
5–10–10	10,493		
		Total	38,090

Specialty and Other Grades

(Over 50 tons)

2– 1– 1	286	6– 6– 4	96
3–12– 6	233	6– 7– 4	178
4– 8– 6	74	6–10– 4	115
4–10– 0	517	8– 6– 2	254
4–10–10	159	8– 6– 4	119
4–12– 4	3,181	8– 8– 4	75
5– 3– 5	744	8–24– 8	575
5– 8– 5	128	10– 6– 4	104
5– 8– 7	13,943		
		Total	20,781

(Less than 50 tons)

0–10–20	5	6– 8– 2	11
0–14– 7	13	6–12– 4	7
4– 4– 2	22	8– 7– 3	30
4– 8– 4	39	10– 5– 5	31
5– 8– 6	21	10– 6– 3	1
5–15– 5	36	12– 4– 4	8
		Total	224
		Grand Total	59,095

I. Raw Materials Chiefly Valuable for Nitrogen

The principal sources of inorganic nitrogen used in fertilizers in the past have been nitrate of soda and sulphate of ammonia. During the 1945-1946 season there was still more nitrate of soda sold than of any other nitrogenous material, but the tonnage of another ammonium salt, nitrate of ammonia, exceeded that of sulphate of ammonia. Pure ammonium nitrate contains 35 per cent of nitrogen as against 21.2 per cent in the sulphate; the fertilizer grade was sold under a guaranty of 33.5 per cent nitrogen.

Other sources of nitrogen in considerable use are cyanamid and urea. Both of these are synthetic products made from inorganic raw materials, but for fertilizer purposes they are classed as sources of non-protein organic nitrogen.

The chief sources of organic nitrogen have been cottonseed meal and castor pomace; some soybean meal was used during the past year, but the total tonnage of vegetable meals used for fertilizer purposes

was less than in previous years, probably because more was not available. Tobacco growers are the chief consumers of organic nitrogenous fertilizers. Two samples of horn and hoof meal were analyzed.

Analyses of official samples of materials in this group are given in Table 1. Analyses of unofficial samples examined for purchasers are not tabulated.

II. Raw Materials Chiefly Valuable for Phosphoric Acid

Superphosphate formerly contained 16 per cent of available phosphoric acid, but in recent years so-called "double" and "triple" superphosphates have appeared that contain 20 per cent or more of available phosphoric acid. These products are made by treating rock phosphate with phosphoric acid instead of the sulphuric acid used in preparing the ordinary superphosphate.

All but two of the official samples analyzed this season were of the 20 per cent grade; one each was sold under a guaranty of 18 and 47 per cent. All samples met or exceeded their guaranties.

One sample of precipitated bone exceeded the guaranty of 38 per cent.

Analyses of official samples are given in Table 2.

III. Raw Materials Chiefly Valuable for Potash

Muriate of potash is the usual source of potash in mixed fertilizers in this State except for tobacco growing, where the presence of chloride is detrimental to the quality of the leaf. Only two official samples of muriate of potash were obtained this year; neither met its guaranty of 60 per cent potash (K_2O).

Three samples of sulphate of potash, one of sulphate of potash-magnesia and two of carbonate of potash substantially met their respective guaranties. No sales of carbonate of potash were reported during the 1944-1945 season; this year the tonnage nearly equalled that of the muriate.

Cottonhull ashes, because of their variable quality, are generally sold on a unit basis. Of two official samples, one was sold on a guaranty of 30 per cent potash (K_2O) but did not meet the guaranty.

Analyses of official samples are given in Table 3.

IV. Raw Materials Supplying Nitrogen and Phosphoric Acid

Dry ground fish and ground bone are the principal items in this group. Last year two samples of ground bone were found to contain ammonium sulphate and rock phosphate; similar adulteration was not encountered this year.

Analyses of official samples of dry ground fish and ground bone, as well as of "Milorganite", a treated sewage sludge, are given in Table 4.

V. Raw Materials Supplying Nitrogen and Potash

This year 160 tons of nitrate of potash were sold in the State. No sample of this salt was obtained by the Station agent. Pure potassium nitrate contains 13.7 per cent of nitrogen (N) and 46.6 per cent of potash (K_2O). The fertilizer grade should contain at least 12 per cent of nitrogen and 44 per cent of potash.

VI. Mixed Fertilizers

COMMERCIAL MIXTURES

Analyses of 129 official samples of mixed fertilizer are given in Table 5. Results are summarized as follows:

Total number of samples		129
Samples deficient in		
one item	18	
two items	4	22
Percentage of samples meeting guaranties		83
Total guaranties made		379[1]
Guaranties not met:		
nitrogen	12	
phosphoric acid	8	
potash	6	26
Percentage met		93

Ninety-three per cent of all guaranties made were substantially met or exceeded.

SPECIAL AND HOME MIXTURES

Seventy-nine samples of special and home mixtures were analyzed for tobacco growers during the year. Analyses are given in Table 6.

STATE PURCHASES OF FERTILIZER

Raw materials and mixed goods supplied to State institutions on State purchase orders are regularly included in our usual inspection. Fertilizers so supplied are subject to registration and tonnage tax.

Samples representing State purchases are indicated in the several tables. They are summarized as follows:

Materials	No. of samples	Reference
Supplying nitrogen	5	Table 1
Supplying phosphoric acid	3	Table 2
Supplying potash	2	Table 3
Supplying nitrogen and phosphoric acid	1	Table 4
Mixed fertilizers	11	Table 5
Total	22	

VII. Miscellaneous

Sheep manure. Fourteen official samples of sheep manure and other dried manures were analyzed. Analyses are given in Table 7.

Limestone and similar materials. No regular inspection of liming materials is made because our fertilizer law exempts "lime" from classification as commercial fertilizer. Twelve samples of limestone

[1] Eight samples with only two guaranties.

and agricultural lime were, however, analyzed for lime (CaO) and magnesia (MgO). Analyses are given in Table 8.

Fertilizers sold in small packages. Registration is not required of those brands of fertilizer that are sold only in packages of less than 10 pounds. Because it was of interest to see how well these small package fertilizers met their guaranties, the Station agent sampled 16 brands during the past year, and analyses are given in Table 9. Of the 38 items guaranteed in 14 of these brands, there was only one deficiency (in phosphoric acid); 97 per cent of all guaranties were substantially met or exceeded.

Other miscellaneous materials. Twenty-four other miscellaneous products were examined. Analyses of 16 of them are given in Table 10.

Check meals and fertilizers. Collaboration was continued with the check analysis programs sponsored by the American Oil Chemists' Society and the F. S. Royster Guano Company. Many chemists from official and commercial laboratories and the laboratories of fertilizer manufacturers take part in these programs, which are valuable to us in providing a continued check on the accuracy of our analysts.

MAINTENANCE OF GUARANTIES

The maintenance of guaranties as compiled from analyses of official samples of ingredient materials and mixed goods, Tables 1 – 5 and 7, is shown in the following tabulation. Deficiencies of 0.1 per cent or less in nitrogen and of 0.2 per cent or less in phosphoric acid and potash are not considered. The proportion of guaranties substantially met was 92 per cent. Under any circumstances, this would be a very satisfactory record for the fertilizer industry, and it is particularly striking that it was attained under the difficult conditions of war times:

	No. of samples	No. of guaranties	Deficiencies
Nitrate of soda	3	3	0
Cyanamid	2	2	2
Urea	1	1	0
Nitrate of ammonia	2	2	0
Sulphate of ammonia	2	2	0
Castor pomace	5	5	0
Cottonseed meal	1	1	1
Horn and hoof meal	1	1	0
Superphosphate	13	13	0
Precipitated bone	1	1	0
Muriate of potash	2	2	2
Sulphate of potash	3	3	1
Sulphate of potash-magnesia	1	1	0
Cottonhull ashes	2	1	1
Carbonate of potash	2	2	0
Dry ground fish	4	8	0
Ground bone	9	18	2
Milorganite	1	1	0
Mixed fertilizer	129	379	26
Sheep manure	14	42	4
Totals	188	488	39
Per cent guaranties met			92

TABLE 1. ANALYSES OF MATERIALS SUPPLYING CHIEFLY NITROGEN

Station No.	Manufacturer or jobber	Sampled from stock of	Per cent nitrogen	
			Found	Guaranteed
	Nitrate of Soda			
5588	Chilean, Champion Brand. Chilean Nitrate Sales Corp., New York 5, N. Y.	New London: Eaton & Wilson Hardware Co.	16.06	16.00
5632[1]	Chilean, Champion Brand. Chilean Nitrate Sales Corp., New York 5, N. Y.	Cheshire: Conn. Reformatory	16.00	16.00
5702[1]	Chilean, Champion Brand. Chilean Nitrate Sales Corp., New York 5, N. Y.	Middletown: Conn. State Hospital	16.16	16.00
	Cyanamid			
5670[1]	20.6%, 'Aero' Granular. American Cyanamid Co., New York 20, N. Y.	Mansfield Depot: Mansfield Training School	19.88	20.60
5703[1]	20.6%, 'Aero' Granular. American Cyanamid Co., New York 20, N. Y.	Middletown: Conn. State Hospital	19.64	20.60
	Uramon Fertilizer Compound			
5805	E. I. du Pont de Nemours & Co., Inc., Wilmington 98, Del.	Bridgeport: Bridgeport Chemical Co.	43.40	42.00
	Fertilizer Compound Containing Ammonium Nitrate			
5701[1]	Nitraprills Fertilizer Compound Chemically Prepared. Ashcraft-Wilkinson Co., Atlanta, Ga.	Middletown: Long Lane Farm	33.17	32.50
5731	Nitraprills Fertilizer Compound Chemically Prepared. Ashcraft-Wilkinson Co., Atlanta, Ga.	New Haven: L. T. Frisbie Co.	33.33	33.50
	Sulphate of Ammonia			
5690	Apothecaries Hall Co., Waterbury, Conn.	East Windsor: Apothecaries Hall Co.	20.84	20.50
5704[1]	Apothecaries Hall Co., Waterbury, Conn.	Middletown: Conn. State Hospital	21.00	20.50
	Castor Pomace			
5838	Apothecaries Hall Co., Waterbury, Conn.	East Windsor: Apothecaries Hall Co.	5.84	4.50
5675	Spencer Kellogg & Sons, Inc., Buffalo, N. Y.	Brooklyn: Adelaid Laframboise	6.17	4.52

[1] State sample.

TABLE 1. ANALYSES OF MATERIALS SUPPLYING CHIEFLY NITROGEN—(*Concluded*)

Station No.	Manufacturer or jobber	Sampled from stock of	Per cent nitrogen	
			Found	Guaranteed
5828	O & W. Olds & Whipple, Inc., Hartford	Hartford: Olds & Whipple, Inc.	5.77	4.50
5835	The Rogers & Hubbard Co., Portland, Conn.	Portland: The Rogers & Hubbard Co.	6.24	4.50
5748	Woodruff's. The Woodruff Fertilizer Works, No. Haven, Conn.	No. Haven: The Woodruff Fertilizer Works	6.10	5.00
	Cottonseed Meal			
5778	"Lovit Brand", 41%. L. B. Lovitt & Co., Memphis, Tenn.	East Windsor: Apothecaries Hall Co.	6.43	6.56
	Horn and Hoof Meal			
5801	Old Deerfield. Old Deerfield Fertilizer Co., So. Deerfield, Mass.	Hazardville: L. B. Haas & Co.	14.31	14.00

TABLE 2. ANALYSES OF SUPERPHOSPHATE, ETC.

Station No.	Manufacturer or jobber	Sampled from stock of	Per cent phosphoric acid			
			Citrate-insoluble	Total	"Available"	
					Found	Guaranteed
	Superphosphate					
5589	18% Normal. The American Agricultural Chemical Co., No. Weymouth, Mass.	New London: New London Grain Co.	0.90	19.40	18.50	18.00
5580	20%. Apothecaries Hall Co., Waterbury, Conn.	Yalesville: The Barnes Bros. Nursery Co.	1.05	22.40	21.35	20.00
5680	Armour's Big Crop 20%. Armour Fertilizer Works, New York 5, N. Y.	East Windsor Hill: David Ahearn	0.95	21.70	20.75	20.00
5599	Corenco 20%. Consolidated Rendering Co., Boston 10, Mass.	New Haven: L. T. Frisbie Co.	0.50	22.05	21.55	20.00
5663	Davco Granulated 20%. Davison Chemical Corp., Baltimore, Md.	Bridgeport: The Berkshire Chemical Co.	0.58	21.35	20.77	20.00
5640	Eastern States Granulated and Pulverized 20%. Eastern States Farmers' Exchange, West Springfield, Mass.	East Hartford: Eastern States Farmers' Exchange	0.48	21.65	21.17	20.00
5643	O & W 20%. Olds & Whipple, Inc., Hartford, Conn.	East Hartford: Olds & Whipple, Inc.	0.18	21.80	21.62	20.00
5830	O & W Triple 47%. Olds & Whipple, Inc., Hartford, Conn.	East Hartford: Olds & Whipple, Inc.	0.38	48.50	48.12	47.00
5674	20%. The Rogers & Hubbard Co., Portland, Conn.	Mansfield Depot: G. Merritt Thompson	0.10	20.15	20.05	20.00
5802[1]	"Summers" 20%. Summers Fertilizer Co., Inc., Baltimore 2, Md.	Somers: Osborn Prison Farm	0.30	21.60	21.30	20.00
5710[1]	"Summers" 20%. Summers Fertilizer Co., Inc., Baltimore 2, Md.	Meriden: Conn. School for Boys	0.58	21.00	20.42	20.00
5669[1]	"Summers" 20%. Summers Fertilizer Co., Inc., Baltimore 2, Md.	Cheshire: Conn. Reformatory	0.05	20.25	20.20	20.00
5571	20%. I. P. Thomas & Son Co., Camden, N. J.	No. Haven: Joseph Beach	0.58	23.20	22.62	20.00
	Precipitated Bone					
5800	Apothecaries Hall Co., Waterbury, Conn.	Hazardville: L. B. Haas & Co.	0.05	40.60	40.55	38.00

[1] State purchase.

TABLE 3. ANALYSES OF POTASH SALTS, ETC.

Station No.	Manufacturer or jobber	Sampled from stock of	Per cent potash	
			Found	Guaranteed
	Muriate of Potash			
5594[1]	Apothecaries Hall Co., Waterbury, Conn.	Niantic: Farm for Women	59.60	60.00
5631[1]	Apothecaries Hall Co., Waterbury, Conn.	Cheshire: Conn. Reformatory	57.31	60.00
	Sulphate of Potash			
5839	Apothecaries Hall Co., Waterbury, Conn.	East Windsor: Apothecaries Hall	48.97	48.00
5831	O & W. Olds & Whipple, Inc., Hartford, Conn.	East Hartford: Olds & Whipple, Inc.	47.85	48.00
5788	Red-H. The Rogers & Hubbard Co., Portland, Conn.	Portland: The Rogers & Hubbard Co.	47.65	48.00
	Sulphate Potash-Magnesia			
5553	Old Deerfield Double. Old Deerfield Fertilizer Co., So. Deerfield, Mass.	Hazardville: L B. Haas & Co., Inc.	21.70	21.50
	Cottonhull Ashes			
5777[2]	Apothecaries Hall Co., Waterbury, Conn.	East Windsor: Apothecaries Hall Co.	25.47	. . . .
5833	O & W. Olds & Whipple, Inc., Hartford, Conn.	East Hartford: Olds & Whipple, Inc.	26.85	30.00
	Carbonate of Potash			
5775	Apothecaries Hall Co., Waterbury, Conn.	East Windsor: Apothecaries Hall Co.	64.01	64.00
5832	O & W. Olds & Whipple, Inc., Hartford, Conn.	East Hartford: Olds & Whipple, Inc.	66.67	65.00

[1] State sample.

[2] Sold on a unit basis.

TABLE 4. ANALYSES OF GROUND FISH, BONE, ETC.

Station No.	Manufacturer and brand	Sampled from stock of	Per cent nitrogen		Per cent phosphoric acid		Mechanical analysis (in percentage)	
			Total found	Total guaranteed	Total found	Total guaranteed	Finer than 1/50 inch	Coarser than 1/50 inch
	Dry Ground Fish							
5837[1]	Apothecaries Hall Co., Waterbury, Conn.	East Windsor: Apothecaries Hall Co.	9.78	9.00	7.55	5.00	....	....
5783[1]	Old Deerfield. Old Deerfield Fertilizer Co., Inc., So. Deerfield, Mass.	Glastonbury: E. J. Bantle	9.96	9.50	6.95	5.00	....	....
5554[2]	O & W Menhaden. Olds & Whipple, Inc., Hartford, Conn.	Hazardville: L. B. Haas & Co.	10.26	9.00	6.65	5.00	....	....
5793[3]	Hubbard. The Rogers & Hubbard Co., Portland, Conn.	Portland: The Rogers & Hubbard Co.	10.00	9.56	6.75	5.00	....	....
	Ground Bone							
5592	Apothecaries Hall Co., Waterbury, Conn.	New London: New London Grain Co.	2.72	2.25	25.70	22.00	49.0	51.0
5772	Armour's. Armour Fertilizer Works, New York 5, N. Y.	East Windsor Hill: David Ahearn	2.70	2.47	26.50	23.00	62.0	38.0
5565	Corenco. Consolidated Rendering Co., Boston 10, Mass.	Thompsonville: Brainard Nursery & Seed Co.	2.84	2.47	25.90	23.00	57.0	43.0
5799	Corenco. Consolidated Rendering Co., Boston 10, Mass.	Manchester: C. R. Burr & Co.	4.25	2.47	20.50	23.00	22.0	78.0
5798	O & W. Olds & Whipple, Inc., Hartford, Conn.	Bloomfield: Bloomfield Farmers' Exchange	3.29	2.47	26.50	22.00	34.0	66.0
5708	Gro-Fast. The Rogers & Hubbard Co., Portland, Conn.	Meriden: Raven Hardware Co.	2.80[4]	2.00	26.25	23.00	63.0	37.0
5787[5]	Gro-Fast. The Rogers & Hubbard Co., Portland, Conn.	Meriden: Undercliff Sanatorium	2.63[3]	2.00	27.10	23.00	70.0	30.0
5792	Hubbard Raw Knuckle Bone Flour. The Rogers & Hubbard Co., Portland, Conn.	Portland: The Rogers & Hubbard Co.	4.50	4.00	24.90	23.00	57.9	40.3

5629	Sawco. Stumpp & Walter Co., New York 8, N. Y.	Stamford: Stumpp & Walter Co.	2.28	2.47	25.55	24.00	50.0	50.0
	Milorganite							
5754	Sewerage Commission of the City of Milwaukee, Milwaukee, Wis.	Darien: Ring's End Fuel Co., Inc.	6.00[7]	6.00	3.90[8]	2.75	....	....

[1] Chlorine 0.40%.
[2] Chlorine 0.42%.
[3] Chlorine 0.34%.
[4] Nitrogen in ammonia 0.68%.
[5] State sample.
[6] Nitrogen in ammonia 0.52%.
[7] Found: nitrogen in nitrates 0.00; nitrogen in ammonia 0.12%; nitrogen organic water-soluble 0.49%; nitrogen organic insoluble 5.39%.
[8] Guaranteed "available" phosphoric acid 2.00%.

TABLE 5. ANALYSES OF MIXED FERTILIZERS

Station No.	Manufacturer and brand	Place of sampling
	The Acme Guano Co., Baltimore, Md.	
5648	Acme 5–8–7	Suffield
5705	Acme 5–10–5	Middletown
5862	Acme 7–7–7	Suffield
	Agricultural Supply Co., West Haven, Conn.	
5601	Yale Special Mixture 8–6–2	New Haven
	American Agricultural Chemical Co., No. Weymouth 91, Mass.	
5694	AA Quality Fertilizer 5–8–7	East Hartford
5693	AA Quality Fertilizer 5–10–10	East Hartford
5734	Agrico for Corn 3–12–6	West Haven
5602	Agrico for Corn 4–12–8	West Haven
5603	Agrico Country Club Fertilizer 6–10–4	West Haven
5576	Agrico for Gardens 4–12–4	Wallingford
5606	Agrico for Gardens 5–10–5	Milford
5578	Agrico for Lawns, Trees and Shrubs 4–12–4	Wallingford
5735	Agrico for New England 4–10–10	West Haven
5582	Agrico for New England 5–8–7	Groton
5575	Agrico for Potatoes 5–10–10	Wallingford
5732	Agrico for Seeding Down 4–12–16	West Haven
5692	Agrico for Tobacco 6–3–6	East Hartford
5676	Agrico for Top Dressing 7–7–7	Putnam
5604	Agrico Phosphate and Potash 0–14–14	West Haven
	Apothecaries Hall Co., Waterbury, Conn.	
5687	Liberty Fertilizer 4–12–4	East Windsor
5689	Liberty Fertilizer 5–10–5	East Windsor
5591	Liberty Fertilizer 5–10–10	New London
5685	Liberty Fertilizer with Sulphate Potash 5–10–10	East Windsor
5581	Liberty Fertilizer Special for Fruit and Grass 7–7–7	Yalesville
5627	Liberty Green Gro Fertilizer 6–7–4	Stamford
5611	Liberty High Grade Market Gardeners 5–8–7	Greenwich
5794[1]	Liberty High Grade Market Gardeners 5–8–7	Portland
5684	Liberty High Grade Market Gardeners with Sulphate of Potash 5–8–7	East Windsor
5586	Liberty Home Garden Fertilizer 5–10–5	New London
5860	Liberty Tobacco Mixture 5–3–5	East Windsor
5776	Liberty Tobacco Mixture 6–3–6	East Windsor
5774	Liberty Tobacco Mixture with Cotton Hull Ashes 6–3–6	East Windsor
5688	Liberty Tobacco Starter Fertilizer 4–10–0	East Windsor
	Armour Fertilizer Works, New York 5, N. Y.	
5682	Armour's Big Crop Fertilizer 4–12–4	East Windsor Hill
5679	Armour's Big Crop Fertilizer 5–8–7	East Windsor Hill

[1] State purchase.

CONTAINING NITROGEN, PHOSPHORIC ACID AND POTASH

Per cent nitrogen					Per cent phosphoric acid			Per cent potash		
In nitrates	In ammonia	Organic water-soluble	Organic water-insoluble	Total	Citrate-insoluble	Total	So-called "available"	As muriate	Total	Station No.
0.46	4.00	0.48	0.15	5.09	0.40	8.75	8.35	7.33	7.33	5648
0.00	4.72	0.20	0.27	5.19	0.85	11.50	10.65	4.85	4.85	5705
0.00	6.00	0.47	0.19	6.66	0.53	7.58	7.05	6.97	7.54	5862
0.00	5.20	2.65	0.41	8.26	0.58	6.98	6.40	2.40	2.40	5601
0.47	4.10	0.14	0.27	4.98	1.73	10.75	9.02	7.40	7.40	5694
0.63	4.20	0.14	0.10	5.07	0.85	11.28	10.43	9.57	10.06	5693
0.00	2.90	0.21	0.15	3.26	1.20	13.70	12.50	6.32	6.32	5734
0.61	3.12	0.22	0.12	4.07	0.58	13.55	12.97	7.97	8.00	5602
0.36	5.22	0.10	0.26	5.94	0.68	11.35	10.67	4.59	4.59	5603
0.74	3.00	0.16	0.32	4.22	1.05	13.50	12.45	4.04	4.17	5576
0.55	4.40	0.06	0.17	5.18	0.80	10.98	10.18	5.35	5.35	5606
0.40	3.32	0.22	0.19	4.13	1.20	13.05	11.85	4.13	4.13	5578
0.66	3.14	0.10	0.10	4.00	0.78	10.90	10.12	9.98	9.98	5735
0.52	4.24	0.10	0.22	5.08	1.05	9.40	8.35	7.00	7.00	5582
0.54	4.00	0.24	0.16	4.94	1.03	11.13	10.10	10.07	10.14	5575
0.40	2.92	0.58	0.08	3.98	0.98	12.90	11.92	15.90	15.90	5732
0.00	0.62	2.56	2.56	5.74	0.63	4.73	4.10	1.38	7.00	5692
0.27	6.28	0.30	0.21	7.06	0.90	8.43	7.53	6.90	6.90	5676
...	...	...	...	...	1.08	15.53	14.45	13.86	13.86	5604
0.59	3.12	0.16	0.49	4.36	0.48	13.38	12.90	4.29	4.63	5687
0.14	4.14	0.56	0.62	5.46	0.23	11.73	11.50	5.72	5.72	5689
0.73	3.82	0.08	0.56	5.19	0.70	11.63	10.93	9.32	9.98	5591
0.16	4.16	0.68	0.40	5.40	0.20	11.05	10.85	1.05	10.77	5685
0.42	5.48	0.16	1.00	7.06	0.50	8.48	7.98	7.34	7.34	5581
0.00	4.80	0.65	1.12	6.57	0.23	7.68	7.45	4.75	4.75	5627
0.00	4.14	0.63	0.57	5.34	0.40	8.73	8.33	2.27	8.14	5611
0.58	4.00	0.20	0.75	5.53	0.45	9.83	9.38	7.99	7.99	5794
0.00	4.56	0.40	0.14	5.10	0.73	8.80	8.07	0.77	7.03	5684
0.80	3.92	0.00	0.63	5.35	0.35	11.30	10.95	5.60	5.60	5586
0.74	1.00	0.40	2.55	4.69	0.15	3.38	3.23	0.54	6.01	5860
1.43	0.10	2.10	2.65	6.28	0.23	4.18	3.95	0.35	7.05	5776
1.07	0.04	2.48	2.71	6.30	0.23	4.33	4.10	0.48	6.61	5774
1.03	2.38	0.04	0.81	4.26	0.83	11.80	10.97	...	...	5688
0.20	3.00	0.58	0.44	4.22	1.23	13.68	12.45	4.25	4.25	5682
0.59	3.88	0.48	0.26	5.21	2.18	11.10	8.92	7.07	7.07	5679

TABLE 5. ANALYSIS OF MIXED FERTILIZERS

Station No.	Manufacturer and brand	Place of sampling
5681	Armour's Big Crop Fertilizer 5–10–10	East Windsor Hill
5771	Armour's Big Crop Tobacco Special 5–3–5	East Windsor Hill
5770	Armour's Big Crop Tobacco Special 6–3–6	East Windsor Hill
5683	Armour's Special Ornamental Fertilizer 6–12–4	East Windsor Hill
	Associated Seed Growers, Inc., Milford, Conn.	
5609	Asgrow Lawn Food 10–6–4	Milford
	The F. A. Bartlett Tree Expert Co., Stamford, Conn.	
5753	Bartlett Green Tree Food 6–8–6	Stamford
	The Berkshire Chemical Co., Bridgeport, Conn.	
5660	Berkshire Fertilizer 0–14–14	Bridgeport
5662	Berkshire Fertilizer 4–12–4	Bridgeport
5598	Berkshire Fertilizer 5–8–7	Guilford
5698[1]	Berkshire Fertilizer 5–8–7	Middletown
5803	Berkshire Fertilizer 5–10–5	Bridgeport
5597	Berkshire Fertilizer 5–10–10	Guilford
5661	Berkshire Fertilizer 7–7–7	Bridgeport
5804	Berkshire Tobacco Fertilizer 6–3–6	Bridgeport
	Consolidated Rendering Co., Boston 10, Mass.	
5600	Corenco 0–14–14 Top Dresser	New Haven
5552	Corenco 4–12–4 Complete Manure	New Haven
5878	Corenco 4–12–4 Complete Manure	New Haven
5551	Corenco 5–8–7 Potato and General Crop	New Haven
5568	Corenco 5–10–5 Home Garden Fertilizer	New Haven
5556	Corenco 5–10–10 Peerless Potato	Thompsonville
5730	Corenco 6–3–6 Special Tobacco Grower	New Haven
5547	Corenco 7–7–7 Complete Fruit and Top Dressing	New Haven
5546	Corenco 8–6–4 Landscape Fertilizer	New Haven
	The Davey Tree Expert Co., Kent, Ohio	
5625	Davey Tree Food 12–4–4	Old Greenwich
	Davison Chemical Corp., Baltimore, Md.	
5806	Davco Granulated Fertilizer 5–10–10	Wilson
	Eastern States Farmers' Exchange, West Springfield, Mass.	
5573	Eastern States 5–10–5 V G	No. Haven
5572	Eastern States 5–10–10	No. Haven
5642	Eastern States 5–15–5	East Hartford
5786	Eastern States 8–4–8	Melrose
5784	Eastern States 8–16–16	Broad Brook
5641	Eastern States 8–24–8	East Hartford
5785	Eastern States 10–10–10	Melrose

[1] State purchase.

CONTAINING NITROGEN, PHOSPHORIC ACID AND POTASH

Per cent nitrogen					Per cent phosphoric acid			Per cent potash		
In nitrates	In ammonia	Organic water-soluble	Organic water-insoluble	Total	Citrate-insoluble	Total	So-called "available"	As muriate	Total	Station No.
0.76	4.10	0.46	0.24	5.56	0.48	11.48	11.00	10.00	10.00	5681
0.30	0.54	1.46	3.32	5.62	0.33	4.30	3.97	1.33	6.81	5771
0.40	0.64	1.64	3.34	6.02	0.25	4.05	3.80	1.30	6.74	5770
0.47	3.72	0.10	0.25	4.54	0.73	15.53	14.80	3.31	3.31	5683
0.23	1.48	8.00	0.47	10.18	0.30	6.10	5.80	5.15	5.15	5609
0.72	3.08	1.56	0.45	5.81	0.28	8.45	8.17	5.53	6.72	5753
...	...	...	...	...	0.60	14.65	14.05	14.32	14.32	5660
0.47	3.48	0.06	0.21	4.22	0.40	13.43	13.03	4.73	5.24	5662
0.53	4.52	0.06	0.11	5.22	0.35	8.83	8.48	6.96	7.21	5598
0.36	4.64	0.00	0.13	5.13	0.40	8.58	8.18	7.29	7.29	5698
0.75	3.90	0.22	0.13	5.00	0.45	11.00	10.55	5.14	5.14	5803
0.49	4.54	0.06	0.13	5.22	0.35	11.23	10.88	10.07	10.08	5597
0.41	6.36	0.08	0.11	6.96	0.25	8.18	7.93	7.09	7.09	5661
0.76	0.04	2.52	2.80	6.12	0.15	4.10	3.95	0.70	6.05	5804
...	...	...	...	...	0.53	14.55	14.02	14.29	15.37	5600
0.00	2.64	0.98	0.18	3.80	0.60	12.98	12.38	4.37	4.50	5552
0.00	3.64	0.54	0.16	4.34	0.68	12.18	11.50	4.49	5.25	5878
0.00	3.68	1.34	0.12	5.14	0.48	8.58	8.10	6.99	7.15	5551
0.00	3.70	1.23	0.15	5.08	0.73	11.13	10.40	0.51	5.46	5568
0.00	3.94	1.11	0.10	5.15	0.63	10.67	10.04	9.45	10.78	5556
0.00	0.40	2.78	3.27	6.45	0.18	4.83	4.65	0.31	5.32	5730
0.48	6.16	0.32	0.09	7.05	0.45	7.53	7.08	6.71	7.02	5547
0.00	5.24	2.68	0.49	8.41	0.45	7.15	6.70	4.21	4.21	5546
1.22	9.86	0.36	0.69	12.13	0.33	5.95	5.62	3.74	3.74	5625
0.36	4.46	0.18	0.12	5.12	0.40	10.23	9.83	10.54	10.54	5806
0.71	3.96	0.22	0.21	5.10	0.40	11.13	10.73	5.76	5.76	5573
0.83	4.04	0.22	0.25	5.34	0.90	10.98	10.08	10.33	10.33	5572
0.86	2.12	2.16	0.30	5.44	0.73	15.85	15.12	5.22	5.22	5642
0.00	0.52	4.64	2.51	7.67	0.28	5.00	4.72	1.24	9.24	5786
1.49	6.06	0.30	0.23	8.08	0.28	16.55	16.27	16.39	17.25	5784
1.35	6.34	0.12	0.37	8.18	0.40	24.60	24.20	9.54	9.54	5641
1.94	7.44	0.20	0.42	10.00	0.28	10.50	10.22	10.64	10.64	5785

TABLE 5. ANALYSIS OF MIXED FERTILIZERS

Station No.	Manufacturer and brand	Place of sampling
	McCormick & Co., Inc. Baltimore 2, Md.	
5857	Hy-Gro 13–26–13	New Haven
	Miller Chemical & Fertilizer Corp., Baltimore 31, Md.	
5861	VHPF 5–25–15	Warehouse Point
	Old Deerfield Fertilizer Co., Inc., South Deerfield, Mass.	
5863	Old Deerfield 5–5–15 Tobacco	West Suffield
5773	Old Deerfield 6–3–6 Complete Tobacco Fertilizer	Broad Brook
	Olds & Whipple, Inc., Hartford, Conn.	
5797	O & W 4–8–4 Complete Lawn Grass Fertilizer	Bloomfield
5645	O & W 4–12–4 Market Garden Fertilizer	East Hartford
5826	O & W 5–3–5 Complete Tobacco Fertilizer Potash derived from Cotton Hull Ashes	East Hartford
5859	O & W 5–3–5 Complete Tobacco Fertilizer	East Hartford
5807	O & W 5–5–15 High Grade Tobacco Starter and Potash	East Hartford
5808	Luxura 5–8–6	East Hartford
5796	O & W 5–8–7 Potato and General Purpose Fertilizer	Bloomfield
5825	O & W 5–8–7 Potato and General Purpose Fertilizer with Sulphate Potash	East Hartford
5593[1]	O & W 5–10–5 Fertilizer	Niantic
5633[1]	O & W 5–10–5 Fertilizer	Cheshire
5595[1]	O & W 5–10–10 Potato Fertilizer	Niantic
5638[1]	O & W 5–10–10 Potato Fertilizer	Cheshire
5829	O & W 6–3–6 Blue Label Tobacco Fertilizer	East Hartford
5858	O & W 6–3–6 Blue Label Tobacco Fertlizer Potash derived from Cotton Hull Ashes	East Hartford
5827	O & W 7–7–7 Top Dressing and Grass Fertilizer	East Hartford
	The Frank S. Platt Co., New Haven 10, Conn.	
5555	Platt's Special 10–5–5 Lawn Dressing	New Haven
	Ralston Purina Co., St. Louis, Mo.	
5678	Purina Plant Food 5–10–5	Putnam
	The Rogers & Hubbard Co., Portland, Conn.	
5549	Gro-Fast Plant Food 5–8–5	New Haven
5709	Gro-Fast Plant Food 5–8–5	Meriden
5696	Hubbard High Potash Fertilizer 5–10–10	Portland
5585	Hubbard Potato Fertilizer 5–8–7	New London
5834	Hubbard Tobacco Grower 6–3–6	Portland

[1] State purchase.

CONTAINING NITROGEN, PHOSPHORIC ACID AND POTASH

Per cent nitrogen					Per cent phosphoric acid			Per cent potash		
In nitrates	In ammonia	Organic water-soluble	Organic water-insoluble	Total	Citrate-insoluble	Total	So-called "available"	As muriate	Total	Station No.
1.98	6.50	6.78	0.07	15.33	0.13	31.05	30.92	8.32	12.85	5857
3.71	1.26	0.14	0.00	5.11	0.03	30.00	29.97	14.90	14.90	5861
1.08	0.62	3.28	0.54	5.52	0.28	6.43	6.15	1.22	16.67	5863
0.62	0.52	1.60	3.61	6.35	0.23	4.58	4.35	0.70	6.34	5773
0.38	2.68	0.72	0.58	4.36	0.68	9.60	8.92	4.21	4.65	5797
0.00	3.36	0.53	0.50	4.39	0.55	12.88	12.33	5.24	5.24	5645
1.19	0.12	2.08	2.23	5.62	0.33	4.03	3.70	0.40	5.39	5826
0.98	0.76	1.20	2.34	5.28	0.23	3.68	3.45	0.51	5.48	5859
2.61	0.00	0.68	1.99	5.28	0.43	6.03	5.60	0.65	16.05	5807
0.00	2.20	1.38	2.12	5.70	1.35	12.45	11.10	5.50	6.28	5808
0.00	4.56	0.37	0.39	5.32	0.28	8.90	8.62	7.50	7.50	5796
0.00	4.44	0.33	0.63	5.40	0.33	8.43	8.10	0.70	7.03	5825
0.28	2.84	1.76	0.47	5.35	0.53	10.98	10.45	4.97	5.67	5593
0.22	3.90	0.82	0.49	5.43	0.43	11.00	10.57	5.61	6.09	5633
0.57	3.96	0.28	0.64	5.45	0.43	11.10	10.67	9.82	10.06	5595
0.54	4.14	0.14	0.56	5.38	0.25	11.35	11.10	10.10	10.10	5638
1.27	0.18	2.20	2.71	6.36	0.33	3.83	3.50	0.56	6.06	5829
1.51	0.18	2.26	2.07	6.02	0.33	4.13	3.80	0.65	6.84	5858
0.48	5.70	0.38	0.52	7.08	0.23	7.45	7.22	7.03	7.03	5827
0.20	6.28	2.46	1.20	10.14	0.45	5.88	5.43	4.77	5.00	5555
0.58	4.20	0.08	0.17	5.03	0.43	11.33	10.90	3.59	5.43	5678
0.38	3.28	0.78	1.06	5.50	0.40	9.03	8.63	5.53	5.59	5549
0.42	2.86	0.80	1.24	5.42	0.28	9.43	9.15	5.41	5.41	5709
0.52	3.12	0.70	1.46	5.80	0.48	10.83	10.35	10.16	10.16	5696
1.31	3.12	0.63	0.47	5.53	0.25	8.80	8.55	8.04	8.04	5585
1.30	0.18	3.32	2.50	7.30	0.20	3.93	3.73	0.68	6.92	5834

TABLE 5 ANALYSIS OF MIXED FERTILIZERS

Station No.	Manufacturer and brand	Place of sampling
5697	Red-H 0–14–14	Portland
5942	Red-H 0–14–14	Norwich
5707	Red-H 4–12–4	Meriden
5695	Red-H 4–12–8	Portland
5584	Red-H 5–8–7	New London
5789	Red-H 5–10–5	Portland
5671	Red-H 5–10–10	Mansfield Depot
5677	Red-H 7–7–7	Putnam
5791	Red-H 8–16–16	Portland
5790	Victory Garden Fertilizer 5–10–5	Portland
	O. M. Scott & Sons Co., Marysville, Ohio	
5579	Scott's Turf Builder 8–8–4	Yalesville
	M. L. Shoemaker, Division of Wilson & Co., Inc., Philadelphia, Pa.	
5567	M. L. Shoemaker's "Swift-Sure" 4–10–0	Suffield
	Stumpp & Walter Co., New York 8, N. Y.	
5628	Sawco General Garden Fertilizer 5–10–5	Stamford
	Summers Fertilizer Co., Inc., Baltimore 2, Md.	
5664[1]	"Summers" 0–20–20 Fertilizer	Southbury
5668[1]	"Summers" 0–20–20 Fertilizer	Cheshire
5665[1]	"Summers" 5–10–10 Fertilizer	Southbury
5596[1]	"Summers" 8–16–16 Fertilizer	Niantic
5667[1]	"Summers" 10–10–10 Fertilizer	Cheshire
5729[1]	"Summers" 10–10–10 Fertilizer	Meriden
	Swift & Co., Plant Food Div., Baltimore, Md.	
5613	Swift's Red Steer 5–8–7	Greenwich
5624	Swift's Red Steer 5–10–10	Cos Cob
5548	Vigoro 4–12–4	New Haven
	Stewart H. Willson, Thompsonville, Conn.	
5691	Willson's Old Enfield Tree Food 6–7–4	East Windsor
	Tennessee Corp., Lockland, Ohio	
5856	Loma 5–10–5	Greenwich
	I. P. Thomas & Son Co., Camden, N. J.	
5569	I. P. Thomas 5–8–7	No. Haven
5666	I. P. Thomas 5–10–10	Hamden

[1] State purchase.

CONTAINING NITROGEN, PHOSPHORIC ACID AND POTASH

Per cent nitrogen					Per cent phosphoric acid			Per cent potash		
In nitrates	In ammonia	Organic water-soluble	Organic water-insoluble	Total	Citrate-insoluble	Total	So-called "available"	As muriate	Total	Station No.
...	...	...	...	...	0.40	13.95	13.55	12.52	12.52	5697
...	...	...	...	...	0.10	14.75	14.65	13.44	13.97	5942
0.69	3.08	0.04	0.53	4.34	0.88	13.08	12.20	4.26	4.26	5707
0.82	3.40	0.16	0.40	4.78	0.85	13.20	12.35	9.22	9.22	5695
0.86	4.00	0.12	0.55	5.53	0.43	8.93	8.50	7.44	7.44	5584
1.08	3.88	0.24	0.50	5.70	0.43	11.18	10.75	5.72	5.72	5789
1.10	3.68	0.40	0.18	5.36	0.38	10.85	10.47	10.08	10.08	5671
0.48	6.04	0.24	0.40	7.16	0.15	8.15	8.00	7.37	7.37	5677
0.62	6.28	0.44	0.39	7.73	0.23	15.30	15.07	16.10	16.10	5791
0.91	4.00	0.08	0.42	5.41	0.53	11.40	10.87	5.50	5.50	5790
0.30	5.54	0.20	1.47	7.51	0.60	9.25	8.65	4.07	4.07	5579
0.66	2.90	0.12	0.64	4.32	0.93	12.88	11.95	...	...	5567
0.40	4.78	0.08	0.45	5.71	0.18	9.33	9.15	7.12	8.64	5628
...	...	...	...	...	0.58	19.95	19.37	17.79	20.01	5664
...	...	...	...	...	0.30	17.75	17.45	16.83	16.83	5668
0.79	3.82	0.28	0.22	5.11	0.60	11.15	10.55	10.79	11.44	5665
0.31	7.22	0.78	0.05	8.36	0.10	12.90	12.80	15.91	16.25	5596
4.76	4.98	0.08	0.06	9.88	0.15	10.83	10.68	10.64	10.64	5667
3.62	3.82	0.14	0.10	7.68	0.38	11.63	11.25	11.24	11.24	5729
0.24	4.50	0.18	0.19	5.11	0.48	9.20	8.72	7.21	7.21	5613
0.13	4.44	0.04	0.39	5.00	0.53	10.90	10.37	9.96	9.96	5624
0.31	3.30	0.14	0.29	4.04	0.40	12.93	12.53	3.58	4.05	5548
0.00	5.26	0.48	0.68	6.42	0.60	8.25	7.65	4.48	4.48	5691
0.25	4.04	0.42	0.27	4.98	0.23	10.12	9.89	5.13	5.78	5856
0.65	3.78	0.08	0.32	4.83	0.60	9.85	9.25	7.87	7.87	5569
0.57	4.14	0.30	0.32	5.33	0.58	10.73	10.15	10.67	10.67	5666

TABLE 5. ANALYSIS OF MIXED FERTILIZERS

Station No.	Manufacturer and brand	Place of sampling
5570	I. P. Thomas 7–7–7	No. Haven
	F. H. Woodruff & Sons, Inc., Milford, Conn.	
5607	Gro-Sod Lawn Food 10–6–4	Milford
	The Woodruff Fertilizer Works, Inc. No. Haven, Conn.	
5608	Clark's Tip-Top 5–8–7 Fertilizer	Milford
5747	Woodruff's 4–12–4 Fertilizer	No. Haven
5746	Woodruff's 5–8–7 Fertilizer	No. Haven
5739	Woodruff's 5–10–5 Fertilizer	No. Haven
5740	Woodruff's 5–10–10 Fertilizer	No. Haven
5738	Woodruff's 6–3–6 Tobacco Fertilizer	No. Haven
5737	Woodruff's 7–7–7 Fertilizer	No. Haven
5736	Woodruff's Lawn Fertilizer 10–6–4	No. Haven

CONTAINING NITROGEN, PHOSPHORIC ACID AND POTASH

Per cent nitrogen					Per cent phosphoric acid			Per cent potash		Station No.
In nitrates	In ammonia	Organic water-soluble	Organic water-insoluble	Total	Citrate-insoluble	Total	So-called "available"	As muriate	Total	
0.49	5.36	0.26	0.23	6.34	0.65	9.70	9.05	7.97	8.08	5570
0.00	5.48	2.78	1.81	10.07	0.65	6.87	6.22	3.95	3.95	5607
0.00	4.74	0.13	0.59	5.46	0.68	9.40	8.72	7.07	7.07	5608
0.45	2.56	0.64	0.56	4.21	1.03	13.20	12.17	4.31	4.83	5747
0.00	3.64	0.75	0.75	5.14	1.05	9.18	8.13	6.23	6.90	5746
0.45	3.20	0.96	0.70	5.31	1.40	11.18	9.78	5.43	5.43	5739
0.00	2.76	1.59	0.65	5.00	0.65	10.78	10.13	9.73	9.73	5740
2.10	0.00	1.60	2.37	6.07	0.23	3.70	3.47	0.51	6.10	5738
0.11	1.20	5.44	0.75	7.50	0.55	7.55	7.00	7.17	7.17	5737
0.17	0.90	7.38	1.80	10.25	0.33	6.40	6.07	4.78	5.43	5736

TABLE 6. ANALYSES OF SPECIAL AND HOME MIXTURES

Station No.	Name of mixture	Sampled or submitted by	Total nitrogen percent	Per cent phosphoric acid			Per cent potash			Station No.
				Citrate-insoluble	Total	So-called "available"	As muriate	Total	Chlorine	
5231	Fertilizer 1946 Formula, G	Hartford: Consolidated Cigar Corp.	5.86	0.23	4.13	3.90	0.51	8.69	0.38	5231
5232	Fertilizer 1946 Formula, Hu	Hartford: Consolidated Cigar Corp.	5.86	0.30	4.43	4.13	0.45	7.15	0.34	5232
5545	Fertilizer Formula SA–1946	Hartford: Consolidated Cigar Corp.	5.03	0.33	4.03	3.70	0.70	8.88	0.53	5545
5814	Home Mixture R H 1946 Formula, Bis	Hartford: Consolidated Cigar Corp.	7.06	0.18	2.85	2.67	1.10	7.21	0.83	5814
5819	1946 O D Formula, 72 Tons, Lev	Hartford: Consolidated Cigar Corp.	5.08	0.18	4.68	4.50	0.54	8.24	0.41	5819
5823	1946 O D Formula, 100 Tons, Bis	Hartford: Consolidated Cigar Corp.	7.06	0.25	4.00	3.75	0.54	5.97	0.41	5823
4657	Home Mixed Fertilizer – Formula 4–2–45	Simsbury: Cullman Bros., Inc.	5.03	0.27	5.72	5.45	0.54	4.71	0.41	4657
4658	Home Mixed Fertilizer 4–3–45	Simsbury: Cullman Bros., Inc.	4.91	0.29	6.01	5.72	0.57	4.07	0.43	4658
4659	Home Mixed Fertilizer 4–4–45	Simsbury: Cullman Bros., Inc.	5.15	0.24	5.67	5.43	0.51	4.05	0.38	4659
4660	Home Mixed Fertilizer 4–5–45	Simsbury: Cullman Bros., Inc.	4.92	0.18	6.07	5.89	0.49	4.51	0.37	4660
4661	Home Mixed Fertilizer 4–6–45	Simsbury: Cullman Bros., Inc.	5.18	0.20	5.53	5.33	0.58	4.26	0.44	4661
4662	Home Mixed Fertilizer 4–7–45	Simsbury: Cullman Bros., Inc.	5.30	0.20	5.57	5.37	0.65	4.50	0.49	4662
4663	Home Mixed Fertilizer 4–8–45	Simsbury: Cullman Bros., Inc.	5.32	0.25	5.29	5.04	0.62	4.54	0.47	4663
4681	Home Mixed Fertilizer 5–1–45	Simsbury: Cullman Bros., Inc.	5.25	0.45	4.65	4.20	0.43	5.04	0.32	4681
4682	Home Mixed Fertilizer 5–2–45	Simsbury: Cullman Bros., Inc.	5.06	0.30	5.45	5.15	0.58	6.57	0.44	4682
4683	Home Mixed Fertilizer 5–3–45	Simsbury: Cullman Bros., Inc.	5.39	0.35	4.66	4.31	0.69	6.40	0.52	4683
4684	Home Mixed Fertilizer 5–4–45	Simsbury: Cullman Bros., Inc.	5.42	0.32	4.64	4.32	0.68	6.60	0.51	4684
4685	Home Mixed Fertilizer 5–5–45	Simsbury: Cullman Bros., Inc.	5.34	0.34	4.45	4.11	0.62	6.29	0.47	4685
4686	Home Mixed Fertilizer 5–6–45	Simsbury: Cullman Bros., Inc.	4.94	0.51	5.59	5.08	0.70	6.65	0.53	4686
4687	Home Mixed Fertilizer 5–7–45	Simsbury: Cullman Bros., Inc.	5.08	0.45	5.36	4.91	0.61	5.95	0.46	4687
4688	Home Mixed Fertilizer 5–8–45	Simsbury: Cullman Bros., Inc.	5.03	0.40	5.35	4.95	0.65	6.82	0.49	4688
4703	Home Mixed Fertilizer 7–S–K–45	Simsbury: Cullman Bros., Inc.	4.82	0.31	6.50	6.19	0.40	6.36	0.30	4703
4704	Home Mixed Fertilizer 7–N–K–45	Simsbury: Cullman Bros., Inc.	4.82	0.35	6.41	6.06	0.47	6.59	0.35	4704
4705	Home Mixed Fertilizer 7–H–4–45	Simsbury: Cullman Bros., Inc.	4.32	0.45	5.99	5.54	0.62	5.80	0.47	4705
4706	Home Mixed Fertilizer 7–H–5–45	Simsbury: Cullman Bros., Inc.	4.54	0.54	6.31	5.77	0.53	6.36	0.40	4706
4707	Home Mixed Fertilizer 7–H–2–45	Simsbury: Cullman Bros., Inc.	4.52	0.63	6.33	5.70	0.56	5.93	0.42	4707

TABLE 6. ANALYSES OF SPECIAL AND HOME MIXTURES—(*Continued*)

Station No.	Name of mixture	Sampled or submitted by	Total nitrogen percentage	Per cent phosphoric acid			Per cent potash			Station No.
				Citrate-insoluble	Total	So-called "available"	As muriate	Total	Chlorine	
4708	Home Mixed Fertilizer 7–H–1–45	Simsbury: Cullman Bros., Inc.	4.13	0.59	6.70	6.11	0.62	6.32	0.47	4708
4780	Home Mixed Fertilizer 6–C–1–46	Simsbury: Cullman Bros., Inc.	4.74	0.61	4.55	3.94	0.54	4.56	0.41	4780
4781	Home Mixed Fertilizer 6–C–2A–46	Simsbury: Cullman Bros., Inc.	5.03	0.74	5.31	4.57	0.56	6.50	0.42	4781
4782	Home Mixed Fertilizer 6–2–46	Simsbury: Cullman Bros., Inc.	5.00	0.77	5.35	4.58	0.58	5.54	0.44	4782
4783	Home Mixed Fertilizer 6–3–W–46	Simsbury: Cullman Bros., Inc.	5.31	0.54	5.30	4.76	0.51	5.35	0.39	4783
4832	Home Mixed Fertilizer 3–B–L–46	Simsbury: Cullman Bros., Inc.	5.50	0.30	4.66	4.36	0.29	5.54	0.22	4832
4833	Home Mixed Fertilizer 3–C–13–46	Simsbury: Cullman Bros., Inc.	5.60	0.49	5.70	5.21	0.27	5.37	0.20	4833
4834	Home Mixed Fertilizer 3–H–1–46	Simsbury: Cullman Bros., Inc.	5.62	0.42	5.78	5.36	0.29	5.16	0.22	4834
4838	Home Mixed Fertilizer 3–H–3–46	Simsbury: Cullman Bros., Inc.	4.89	0.68	6.01	5.33	0.49	6.36	0.37	4838
4839	Home Mixed Fertilizer 3–L–11–46	Simsbury: Cullman Bros., Inc.	5.32	0.46	5.20	4.74	0.56	6.98	0.42	4839
4840	Home Mixed Fertilizer 3–L–12–46	Simsbury: Cullman Bros., Inc.	5.54	0.37	5.55	5.18	0.48	6.87	0.36	4840
4841	Home Mixed Fertilizer 3–M–L–46	Simsbury: Cullman Bros., Inc.	5.25	0.35	5.15	4.80	0.45	6.27	0.34	4841
4842	Home Mixed Fertilizer 3–S–1–2–46	Simsbury: Cullman Bros., Inc.	5.32	0.43	5.35	4.92	0.44	7.00	0.33	4842
4843	Home Mixed Fertilizer 3–S–3–46	Simsbury: Cullman Bros., Inc.	5.53	0.48	5.60	5.12	0.43	4.91	0.32	4843
4844	Home Mixed Fertilizer 3–T–14–46	Simsbury: Cullman Bros., Inc.	5.32	0.35	5.30	4.95	0.44	6.23	0.33	4844
4845	Home Mixed Fertilizer 3–V–2–46	Simsbury: Cullman Bros., Inc.	5.89	0.34	4.88	4.54	0.31	5.74	0.25	4845
4846	Home Mixed Fertilizer 3–Z–L–46	Simsbury: Cullman Bros., Inc.	5.37	0.37	4.78	4.41	0.44	7.04	0.33	4846
4884	Home Mixed Fertilizer 1–A–1–46	Simsbury: Cullman Bros., Inc.	5.54	0.36	5.88	5.52	0.20	5.46	0.15	4884
4885	Home Mixed Fertilizer 1–A–2–46	Simsbury: Cullman Bros., Inc.	5.24	0.44	5.45	5.01	0.23	5.69	0.17	4885
4886	Home Mixed Fertilizer 1–A–3–46	Simsbury: Cullman Bros., Inc.	5.76	0.50	6.15	5.65	0.16	5.53	0.12	4886
4887	Home Mixed Fertilizer 1–A–4–46	Simsbury: Cullman Bros., Inc.	5.52	0.38	5.28	4.90	0.21	4.96	0.16	4887
4888	Home Mixed Fertilizer 1–B–1–46	Simsbury: Cullman Bros., Inc.	5.44	0.60	7.30	6.70	0.24	5.28	0.18	4888
4889	Home Mixed Fertilizer 1–M–1–46	Simsbury: Cullman Bros., Inc.	5.00	0.35	6.65	6.30	0.33	6.19	0.25	4889
4890	Home Mixed Fertilizer 1–M–2–46	Simsbury: Cullman Bros., Inc.	5.68	0.35	5.98	5.63	0.41	4.71	0.31	4890
4891	Home Mixed Fertilizer 1–Ma–2–46	Simsbury: Cullman Bros., Inc.	5.36	0.40	6.85	6.45	0.25	5.89	0.19	4891
4892	Home Mixed Fertilizer 1–Mc–P–46	Simsbury: Cullman Bros., Inc.	4.53	0.28	5.85	5.57	0.47	6.50	0.35	4892
4893	Home Mixed Fertilizer 1–Sti–1–46	Simsbury: Cullman Bros., Inc.	5.55	0.43	6.40	5.97	0.20	5.30	0.15	4893
4894	Home Mixed Fertilizer 1–S–M–CS&NS–46	Simsbury: Cullman Bros., Inc.	10.76	0.15	2.60	2.45	0.21	1.28	0.16	4894

TABLE 6. ANALYSES OF SPECIAL AND HOME MIXTURES—(*Concluded*)

Station No.	Name of mixture	Sampled or submitted by	Total nitrogen per cent	Per cent phosphoric acid			Per cent potash			Station No.
				Citrate-insoluble	Total	So-called "available"	As muriate	Total	Chlorine	
4932	Home Mixed Fertilizer 2–H–1–46	Simsbury: Cullman Bros., Inc.	4.75	0.20	6.65	6.45	0.32	6.22	0.24	4932
4933	Home Mixed Fertilizer 2–H–2–46	Simsbury: Cullman Bros., Inc.	5.00	0.20	6.55	6.35	0.32	5.71	0.24	4933
4934	Home Mixed Fertilizer 2–H–5–46	Simsbury: Cullman Bros., Inc.	4.76	0.30	7.25	6.95	0.31	6.34	0.23	4934
4935	Home Mixed Fertilizer 2–Ha–1–46	Simsbury: Cullman Bros., Inc.	5.00	0.25	6.98	6.73	0.45	6.09	0.34	4935
4936	Home Mixed Fertilizer 2–Ha–2–46	Simsbury: Cullman Bros., Inc.	4.94	0.23	6.08	5.85	0.31	5.48	0.23	4936
4937	Home Mixed Fertilizer 2–K–1–46	Simsbury: Cullman Bros., Inc.	4.96	0.15	6.23	6.08	0.24	4.79	0.18	4937
4938	Home Mixed Fertilizer 2–K–2–46	Simsbury: Cullman Bros., Inc.	4.98	0.20	6.40	6.20	0.36	5.21	0.27	4938
4939	Home Mixed Fertilizer 2–K–3–46	Simsbury: Cullman Bros., Inc.	4.94	0.15	6.68	6.53	0.51	6.16	0.38	4939
4940	Home Mixed Fertilizer 2–K–6–46	Simsbury: Cullman Bros., Inc.	4.84	0.20	6.75	6.55	0.32	5.73	0 24	4940
4941	Home Mixed Fertilizer 2–L&B–L–46	Simsbury: Cullman Bros., Inc.	5.29	0.20	5.78	5.58	0.36	5.32	0.27	4941
4942	Home Mixed Fertilizer 2–N2&SJ–46	Simsbury: Cullman Bros., Inc.	5.42	0.23	6.18	5.95	0.32	6.09	0.24	4942
4943	Home Mixed Fertilizer 2–N–3–46	Simsbury: Cullman Bros., Inc.	5.29	0.23	7.02	6.79	0.45	6.20	0.34	4943
5170	Fertilizer Mixture No. 1 A	West Hartford: General Cigar Co., Inc., Farming Division	5.44	0.15	4.08	3.93	0.27	5.68	0.20	5170
5426	Tobacco Fertilizer	West Hartford: General Cigar Co., Inc., Farming Division	5.93	0.20	3.15	2.95	0.88	6.30	0.66	5426
5532	Fertilizer Mixture No. 3	West Hartford: General Cigar Co., Inc., Farming Division	5.29	0.43	4.13	3.70	0.29	5.70	0.22	5532
5533	Buckland Mixture No. 3	West Hartford: General Cigar Co., Inc.	5.45	0.38	3.90	3.52	0.35	5.29	0.26	5533
5716	Home Mixture 46 A	Hartford: L. B. Haas & Co.	5.95	0.28	5.63	5.35	1.10	6.59	0.83	5716
5717	Home Mixture 46 B	Hartford: L. B. Haas & Co.	6.26	0.28	5.85	5.57	0.40	6.74	0.30	5717
5718	Home Mixture 46 C	Hartford: L. B. Haas & Co.	6.45	0.43	5.45	5.02	0.74	6.41	0.56	5718
5719	Home Mixture 46 D	Hartford: L. B. Haas & Co.	5.96	0.20	4.40	4.20	0.44	6.40	0.33	5719
5720	Home Mixture 46 E	Hartford: L. B. Haas & Co.	6.24	0.25	5.03	4.78	0.47	6.38	0.35	5720
5721	Home Mixture 46 F	Hartford: L. B. Haas & Co.	8.03	0.40	3.45	3.05	0.82	4.09	0.62	5721
5810	Fertilizer A	Buckland: Meyer & Mendelsohn, Inc.	6.00	0.28	5.48	5.20	0.72	6.72	0.54	5810
5811	Fertilizer B	Buckland: Meyer & Mendelsohn, Inc.	6.27	0.55	5.50	4.95	0.72	5.49	0.54	5811
5850	Tobacco Mixture Fertilizer	So. Windsor: L. W. Newberry	7.27	0.30	5.93	5.63	1.50	12.60	1.13	5850

TABLE 7. ANALYSES OF SHEEP MANURE, ETC.

Station No.	Name of mixture	Sampled or submitted by	Per cent nitrogen		Per cent total phosphoric acid		Per cent potash		Station No.
			Found	Guaranteed	Found	Guaranteed	Found	Guaranteed	
5733	Pulverized Sheep and Goat Manure. The American Agricultural Chemical Co., No. Weymouth, Mass.	West Haven: American Agricultural Chemical Co.	1.65	1.25	1.83	1.00	3.76	2.00	5733
5587	Sheep Manure. Apothecaries Hall Co., Waterbury, Conn.	New London: Eaton & Wilson Hardware	1.88	1.00	1.83	0.50	3.66	1.00	5587
5700[8]	Sheep Manure. Apothecaries Hall Co., Waterbury, Conn.	Middletown: Long Lane Farm	1.81	1.00	1.90	0.50	4.15	1.00	5700
5836	Armour's Pulverized Sheep Manure. Armour Fertilizer Works, New York, N. Y.	East Windsor Hill: David Ahearn	1.59	1.50	1.37	1.00	1.61	2.50	5836
5550	Driconure. Atkins and Durbrow, Inc., New York, N. Y.	New Haven: Lightbourne & Pond	2.82	2.00	2.60	...[1]	1.47	1.00	5550
5574	Corenco Sheep Manure. Consolidated Rendering Co., Boston, Mass.	Wallingford: A. E. Hall	1.71	1.25	1.58	1.00	3.24	2.00	5574
5626	Davey Shredded Cattle Manure. The Davey Tree Expert Co., Kent, Ohio	Old Greenwich: The Davey Tree Expert Co.	2.12	1.00	2.00	...[2]	2.38	2.00	5626
5649	Norwood Brand Sheep Manure. Norwood Brand Fertilizer Co., No. Reading, Mass.	Bridgeport: Willis Seed Store	1.47	1.83	0.48	...[3]	2.73	1.03	5649
5557	Wizard Brand Cow Manure. The Pulverized Manure Co., Chicago 9, Ill.	Thompsonville: Brainard Nursery & Seed Co.	1.91	2.00	1.50	...[4]	1.60	1.00	5557
5566	Wizard Brand Pulverized Sheep Manure. The Pulverized Manure Co., Chicago 9, Ill.	Thompsonville: Brainard Nursery & Seed Co.	1.76	2.00	2.40	...[5]	3.29	2.00	5566
5706	Gro-Fast Sheep Manure. The Rogers & Hubbard Co., Portland, Conn.	Middletown: Meech & Stoddard, Inc.	1.60	1.25	1.85	1.00	3.57	2.50	5706
5749	Sawconure. Stumpp & Walter Co., New York 8, N. Y.	Stamford: Stumpp & Walter Co.	3.67	2.00	2.73	...[6]	1.61	1.00	5749
5583	Sheep Manure. Swift & Co., Plant Food Div., Baltimore, Md.	Groton: C. W. Campbell Co.	1.48	1.50	1.80	...[7]	3.84	2.50	5583
5756	Bovung. Walker-Gordon Laboratory Co., Plainsboro, N. J.	So. Norwalk: Fox Cycle Hardware Co.	2.07	2.00	1.80	1.00	2.54	1.00	5756

[1] Guaranteed "available" phosphoric acid, 1.00 per cent; found 2.37 per cent.
[2] Guaranteed "available" phosphoric acid, 1.00 per cent; found 1.77 per cent.
[3] Guaranteed "available" phosphoric acid, 0.89 per cent; found 0.35 per cent.
[4] Guaranteed "available" phosphoric acid, 1.00 per cent; found 1.10 per cent.
[5] Guaranteed "available" phosphoric acid, 1.00 per cent; found 2.20 per cent.
[6] Guaranteed "available" phosphoric acid, 1.00 per cent; found 2.60 per cent.
[7] Guaranteed "available" phosphoric acid, 1.00 per cent; found 1.50 per cent.
[8] State purchase.

TABLE 8. ANALYSES OF LIMESTONE AND SIMILAR MATERIALS

Station No.	Manufacturer and brand	Sampled from stock of, or sent by	Chemical analysis: Per cent lime, Found	Per cent lime, Guaranteed	Per cent magnesia, Found	Per cent magnesia, Guaranteed	Total oxides, per cent	Mechanical analysis (in percentage): 20 mesh	100 mesh	Station No.
	Submitted by Station Agent									
	Lee Lime Corp., Lee, Mass.									
5865	Tobey Agra Hydrate	West Suffield: H. L. Oppenheimer & Son	39.86	35.00	28.09	25.00	67.95	. . .	. . .	5865
	Submitted by Purchaser									
	Conklin Limestone Co., Canaan, Conn.									
5934	Limestone—Sample #1 North	Canaan: Conklin Limestone Co.	38.46	. . .	12.74	. . .	51.20	. . .	. . .	5934
5935	Limestone—Sample #2 South	Canaan: Conklin Limestone Co.	32.23	. . .	14.81	. . .	47.04	. . .	. . .	5935
	Connecticut Agstone Co., Danbury, Conn.									
5714	Ground limestone	Hartford: Production and Marketing Administration	41.72	. . .	4.89	. . .	46.61	100.0	60.5	5714
	Manufacturer Unknown									
4711	Lime	Hartford: Consolidated Cigar Corp.	47.09	. . .	33.00	. . .	80.09	. . .	. . .	4711
5824	Lime–10 ton G	Hartford: Consolidated Cigar Corp.	46.42	. . .	32.55	. . .	78.97	. . .	. . .	5824
4957	Pulverized limestone	Canaan: Robert D. May	30.39	. . .	21.14	. . .	51.53	. . .	. . .	4957
4958	Gray limestone	Canaan: Robert D. May	30.56	. . .	21.06	. . .	51.62	. . .	. . .	4958
4959	White limestone	Canaan: Robert D. May	29.93	. . .	20.12	. . .	50.05	. . .	. . .	4959
4882	Limestone #1	Canaan: James R. Place	29.79	. . .	20.47	. . .	50.26	. . .	. . .	4882
4883	Limestone #2	Canaan: James R. Place	30.06	. . .	21.46	. . .	51.52	. . .	. . .	4883
4656	Ground limestone	Hartford: Production and Marketing Administration	27.91	. . .	16.58	. . .	44.49	. . .	. . .	4656

TABLE 9. ANALYSES OF SMALL PACKAGE FERTILIZERS

Station No.	Manufacturer and brand	Place of sampling	Per cent nitrogen						Per cent phosphoric acid			Per cent potash		Station No.
			In nitrates	In ammonia	Organic water-soluble	Organic active-insoluble	Organic inactive-insoluble	Total	Citrate-insoluble	Total	So-called "available"	As muriate	Total	
	American Agricultural Chemical Co., No. Weymouth, Mass.													
5755	Agrico for Broadleaf Evergreens 6–10–4	Darien	0.00	5.38	0.20	0.53	0.13	6.24	1.55	12.58	10.03	4.01	4.01	5755
5610	Agrico for Gardens 4–12–4	Greenwich	0.78	2.92	0.40	0.28	0.18	4.56	1.10	14.00	12.90	4.39	4.39	5610
5605	Agrico for Gardens 5–10–5	Milford	0.42	4.24	0.36	0.21	0.11	5.34	0.78	11.25	10.47	5.29	5.29	5605
	Goulard & Olena, Inc., New York, N. Y.													
5757	G & O Special 7–8–5 Rose Food	South Norwalk	1.41	3.12	0.84	1.22	0.32	6.91	0.48	9.33	8.85	4.94	4.94	5757
	A. H. Hoffman, Inc., Landisville, Pa.													
5767	Hoffman Bone Meal	South Norwalk	...	...	...	...	...	3.86	...	20.60	....	...	...	5767
5768	Hoffman's Cow Manure 2–1–1	South Norwalk	0.00	0.28	0.86	...	...	2.74	0.13	2.20	2.07	...	1.65	5768
5769	Hoffman Sheep Manure	South Norwalk	0.00	0.08	0.12	...	...	1.93	...	1.78	....	...	2.58	5769
	Miller Chemical & Fertilizer Corp., Baltimore, Md.													
5894	VHPF 5–25–15	Warehouse Point	5.90	0.56	0.00	...	...	6.64	trace	23.00	23.00	0.20	20.22	5894
	The Pulverized Manure Co., Chicago, Ill.													
5612	Wizard Brand Pulverized Sheep Manure 2–1–2	Greenwich	0.00	0.24	0.37	0.85	1.12	2.28	0.28	2.10	1.82	...	3.95	5612
	The Rogers & Hubbard Co., Portland, Conn.													
5639	Gro-Fast Plant Food 5–8–5	Hartford	0.74	2.50	0.94	0.84	0.39	5.41	0.53	10.35	9.82	6.05	6.05	5639
	Stumpp & Walter Co., New York, N. Y.													
5751	Sawco Nitrate of Soda 15–0–0	Stamford	16.06	...	...	...	...	...	...	...	....	...	...	5751
5630	Sawco Superphosphate 0–20–0	Stamford	...	...	...	...	...	...	0.38	20.90	20.52	...	...	5630
5752	Treewiz 8–6–4	Stamford	2.38	5.60	0.16	...	...	8.34	0.50	6.93	6.43	4.65	4.65	5752
	Swift & Company, Baltimore, Md.													
5614	Vigoro Complete Plant Food 4–12–4	Greenwich	0.49	3.56	0.00	...	...	4.27	0.50	13.35	12.85	4.22	4.22	5614
5623	Vigoro Complete Plant Food (for house plants) 4–12–4	Greenwich	0.45	3.56	0.16	...	...	4.43	0.45	13.58	13.13	4.30	4.30	5623
5622	Vigoro Complete Plant Food (Tablets) 4–12–4	Greenwich	0.30	3.38	0.14	...	...	4.11	0.85	13.55	12.70	4.32	4.32	5622

TABLE 10. ANALYSES OF OTHER MISCELLANEOUS MATERIALS

Station No.	Material	Moisture per cent	Ash per cent	Organic and volatile per cent	Nitrogen per cent	Phosphoric acid per cent		Potash per cent	Other analytical items per cent
						Total	So-called "available"		
5105	Apple tree fertilizer	...	...	...	11.47	3.53	3.11	3.49	Nitrate N 8.29; ammonia N 3.00; sol. organic N 0.18; Cl 2.55.
5054	Cottonseed flour	...	...	...	8.69	3.58	3.43	1.78	Cl trace.
4837	Manure	83.0	....	....	0.33	0.13	...	0.39	
3544	Peat	77.58	6.23	16.19	0.39	...	...	...	
4989	Peat moss and poultry manure A	...	...	...	2.65	3.25	...	2.15	
4990	Peat moss and poultry manure B	...	...	...	2.63	2.97	...	2.44	
5520	Peat moss and poultry manure	7.64	18.55	73.81	3.65	3.33	...	2.00	
5673	Peat moss and poultry manure	9.22	3.30	87.48	0.86	0.25	0.20	0.35	
5983	Plastic	...	...	...	20.28	...	...	...	Sol. organic N 0.80; insol. organic N 19.48; active insol. alk. permanganate method 40.0.
6515	Plastic	...	...	...	18.62	...	...	...	Ammonia N 0.04; sol. organic N 3.46; insol. organic N 15.12; active insol. alk. permanganate method 50.0.
5654	Sewage sludge	64.92	22.72	12.36	0.70	0.48	...	0.10	Insol. organic N 0.67; active insol. alk. permanganate method 54.0.
5851	Sewage sludge	5.08	41.98	52.94	2.90	1.33	0.88	0.41	Sol. organic N 0.20; insol. organic N 2.70; active insol. alk. permanganate method 56.2.
7039	Sewage sludge	4.40	60.14	35.46	1.61	2.20	1.15	0.06	Cl 0.23; total S 1.13; fat 5.28.
6514	Stable liquid	...	...	...	0.22	0.021	...	0.60	Nitrate N 0.00; ammonia N 0.14; sol. organic N 0.08.
4944	Tobacco stems	...	...	...	2.54	1.18	...	9.68	
3852	Zinc sulfate	....	...	...	...	...	...	...	$ZnSO_4$, H_2O 99.0; ZnO 0.5; MgO 0.10; Fe 0.02; Ca, Mn, Al, Cd, Cl traces.

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